402 Vegan Diets

Definition/ cut-off value

Consumption of plant origin foods only, an eating plan with no animal products (no meat, poultry, fish, eggs, milk, cheese, or other dairy products) and avoidance of foods made with animal product ingredients.

For infants:

- the guardian must be intentionally providing a vegan diet for the infant
- infants who are on soy based formula for medical reasons do not qualify for this risk factor

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Breastfeeding	IV	N
Postpartum	VI	N
Infants	IV	N
Children	V	Y

Documentation

Circle the Vegan diet statement on the Medical History form.

Enter NRF #402 in screen 106.

Document High Risk Care Plan in participant's chart.

Suggested components to assess:

- adequate variety of nutrient-dense plant foods
- adequate calories and protein for normal growth
- use of fortified foods or vitamin-mineral supplement

Document referrals in screen 106.

Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.

Must be manually selected.

Continued on next page

402 Vegan Diets, Continued

Counseling guidelines

This is a serious condition if the women or caretaker of a child is not aware of how to plan an adequate diet. If this exists, refer to the Registered Dietitian.
Determine the vegetarian food plan that the participant is following.
If total vegan, explain methods to achieve adequate food sources of nutrients with emphasis on:

- adequate calories
- vitamin D*
- protein*
- iron*
- calcium
- essential amino acids
- vitamin B12*
- zinc
- linolenic acid

*WIC foods can provide these nutrients in a strict vegan diet

If participant does not know how to meet the essential nutrients listed above:

- refer to the Registered Dietitian

Infants:

- all necessary nutrient needs can be met through breastmilk (if mother's nutrition status is adequate) or soy formulas

Women and Children:

- eat a wide variety of foods, including milk products and eggs, if acceptable
  - if not consider soy products
  - the only soy products available through WIC are infant soy formulas and Next Step Soy
- if no milk/formula:
  - use a supplement of B12 daily (e.g. fortified soy milk, WIC cereal)
  - if they drink goat or soy milk: partially supplement with B12
  - supplement calcium and vitamin D
    - issue calcium fortified orange juice through WIC if needed
    - additional calcium: legumes, tofu processed with sulfate, almonds, sesame seeds, low oxalate green leafy vegetables, fortified soy milk
    - vitamin D: regular exposure to sunlight

Eat a wide variety of plant foods to obtain complete proteins.

Continued on next page

402 Vegan Diets, Continued

Counseling guidelines, (continued)

Iron sources: legumes, green leafy vegetables, whole grains, fortified cereals, dried fruits, blackstrap molasses.
Zinc sources: legumes, hard cheeses, whole grain breads and cereals, wheat germ, fortified cereals, tofu, miso, nuts.
Use iodized salt.
Additional guidelines for children:

- growth rates are improved if they can consume some dairy foods
- encourage the addition of foods high in nutrient and caloric density as well as offering protein foods of high biological value
- emphasize foods that are good sources of both protein and zinc (e.g. legumes, nuts)
- encourage foods high in riboflavin and essential fatty acids

Suggested handouts

Infant Feeding Guide
How Much Is Enough For My Child?
What to Eat When You Are Pregnant
I'm Breastfeeding - What Should I Eat?

Follow up and assessment guidelines

If pregnant, weight gain plotted and assessed at each clinic visit.
If child, individual assessment with a Registered Dietitian.

- reassess growth (weight, height, weight for height)
- reassess dietary/caloric intake
- assess compliance with recommendations
- document if participant followed through on referrals

If infant or woman, appropriate nutrition education at each visit.

Justification

Generally, vegetarian diets with dairy products and eggs are associated with good health (1). However, strict vegan diets may be inadequate in calories, vitamin B12, vitamin D, calcium, iron, zinc, protein, and essential amino acids needed for growth and development.

The more limited the diet, the greater the health risk. It is estimated that 1 to 6% of the population are vegans. WIC can address nutrient deficiencies by managing vegan diets.

Continued on next page

402 Vegan Diets, Continued

Justification for high risk

Deficits in height and weight have occurred among young children on vegan diets. Young vegan children were significantly shorter and lighter than were age- and gender-matched vegetarian children and control children.

References

1. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; pp. 259-260.
2. Zeman, F.: Clinical Nutrition and Dietetics; 2nd edition; 1991; pp. 122-123.
3. Duyff, R.: The American Dietetic Association's Complete Food & Nutrition Guide; 1996; pp. 553-569.
4. Messina, V, Mangels, AR. Considerations in planning vegan diets: Children. *J Amer Diet Assoc*. 2001; 101:661-669.
5. Mangels, AR, Messina, V. Consideration in planning vegan diets: Infants. *J Amer Diet Assoc*. 2001; 101:670-677.

411 Inappropriate Infant Feeding Practices

Definition/ cut-off value

Routine use of any of the following**:**

a) Infant not fed breastmilk or iron-fortified infant formula as primary source of nutrients during first 6 months of life and as primary fluid consumed during the second 6 months of life (includes infants prescribed low iron formula without iron supplementation).
b) Feeding cow's milk (fresh, canned, evaporated or sweetened condensed, whole, low or reduced fat, skim or nonfat milk), goat's milk, sheep's milk, imitation milks, or substitute milks in place of breastmilk or FDA-approved infant formula during the first year of life.
c) Late introduction of solids: failure to introduce solids by 7 months of age.
d) Not using a spoon to introduce and feed early solids.
e) Infant not beginning to self-feed with fingers by 7-9 months.
f) Feeding solids in a bottle (including enlarging the nipple to accommodate thickened liquid).
g) Using a syringe-action nipple feeder.
h) Feeding foods of inappropriate consistency, size, or shape that put the infant at risk of choking.
i) Inappropriate, infrequent or highly restrictive feeding schedules or forcing an infant to eat a certain type and/or amount of food.
j) Feeding any amount of honey to infant under 1 year of age (added to liquids or solid foods, used in cooking, as part of processed foods (i.e. - honey graham crackers, on a pacifier, etc.).
k) Consumption of foods and beverages low in essential nutrients and high in calories.
l) Use of caffeine-containing foods or beverages that replace or are in addition to age appropriate nutrient dense foods needed for growth and development.
m) Excessive feeding of water (a total of 4-8 ounces per day of plain water is appropriate for infants when solid foods are started or in hot weather for formula-fed or partially breastfed babies).

Continued on next page

411 Inappropriate Infant Feeding Practices, Continued

Participant category and priority level

Category	Priority	High Risk
Infants	IV	N

Documentation

Circle the inappropriate practice on the Infant History form.
Enter NRF #411 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

Explain methods to achieve an adequate diet and infant feeding practices with emphasis on:

- use of breastmilk or FDA approved iron-fortified infant formula as the primary source of nutrients during the first 6 months and as the primary fluid consumed during the second six months

Encourage introduction of solids by a spoon between 4-6 months.
Encourage introduction of appropriate finger foods between 6-8 months of age.

- the shape of the food for finger feeding is important
- melba toast, crackers and teething biscuits are frequently introduced at this time

Continued on next page

411 Inappropriate Infant Feeding Practices, Continued

Counseling guidelines, (continued)

Explain infant foods introduced need to be of the appropriate size, shape, and consistency in order to reduce the risk of choking.

- hard, round, smooth, slick, sticky pieces or pieces that do not break apart easily that can block breathing should be avoided. Such as:
  - carrots
  - grapes
  - hot dogs
  - nuts
  - seeds
  - hard round candies
  - popcorn
  - raw vegetables
  - tough meats

The texture of solid foods fed to infants should be based on age and developmental readiness.

- early solids should have a smooth texture which can gradually be thickened
- table foods should be tender and cut into pieces that can be easily chewed and swallowed

Encourage caregivers to be sensitive to signs of hunger and satiety.

Breastfeeding frequency and duration should be appropriate for age to avoid lactation insufficiency and infant failure-to-thrive.

Caregivers should be counseled to avoid all potential sources of honey.

Encourage limited intake of nutrient-poor foods and beverages, including caffeine containing items.

Counsel against excessive water intake:

- a total of 4-8 ounces per day is appropriate under the following conditions:
  - for infants who have started solid foods
  - in hot weather for formula fed or partially breastfed babies

Suggested handouts

Infant Feeding Guide
The First 12 Months
Feeding Your Baby Solid Foods

Continued on next page

411 Inappropriate Infant Feeding Practices, Continued

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Justification

a) During the first year of life, breastfeeding is the preferred method of infant feeding. For infants fed infant formula, iron-fortified formula is generally recommended (1, 2, 3) as a substitute for breastfeeding. "The American Academy of Pediatrics recommends breastmilk for the first 12 months of life because of its acknowledged benefits to infant nutrition, gastrointestinal function, host defense, and psychological well-being." (4)

b) Cow's milk, goat's milk, sheep's milk, imitation milks and substitute milks do not contain nutrients in amounts appropriate for infants. Cow's milk can cause occult blood loss, stress on the kidneys and allergic reactions. Sweetened condensed milk has an abundance of sugar which displaces other nutrients or causes overconsumption of calories. Recipes using canned evaporated milk do not contain optimal kinds and amounts of nutrients infants need. (5, 6, 7, 8, 9, 10).

c) From 4-12 months of age, the transition should take place whereby nutrient and caloric intake from a liquid diet of breastmilk or infant formula is gradually replaced with solid foods. There is a critical or sensitive period of development in relation to eating, when a specific stimulus, solid food, must be introduced for the infant to learn the action of accepting and eating table food, which is more difficult to masticate. If solid foods are withheld until a later age, the infant will have considerably more difficulty in accepting them (11, 12).

d) Adding dilute cereal or other solid foods to bottles rather than spoon feeding deprives infants of the opportunity to learn to feed themselves (13, 14, 15).

e) Between 24 and 28 weeks of age, chewing movements (up-and-down movement of the jaws) occurs. This, combined with the ability to grasp, the hand-to-mouth route of grasped objects, and sitting posture, indicates a readiness of the infant to finger feed. Thus, the shape of the food presented for the child to finger feed is important. Melba toast, crackers, and teething biscuits are frequently introduced at this time (16).

Continued on next page

411 Inappropriate Infant Feeding Practices, Continued

Justification (continued)

f/g) This type of feeding results in force-feeding, inappropriately increases the energy and nutrient composition of the formula, deprives the infant of experiences important in the development of feeding behavior, and could cause an infant to choke (17,18).

h) Cases of choking and aspiration have occurred when feeding infants foods of inappropriate size, shape, and consistency. In particular, hard, round, smooth, slick, sticky pieces or pieces that do not break apart easily that can block breathing should be avoided (such as carrots, grapes, hot dogs, nuts, seeds, hard round candies, popcorn, raw vegetables, tough meat and others.) The texture of solid foods fed to infants should be decided based on age and developmental readiness. Early solids should have a smooth texture which can gradually be thickened to a firmer texture over time. Table foods should be tender and cut in pieces that can be easily chewed and swallowed (19, 20).

i) Infants held to rigid feeding schedules are often underfed or overfed. Caregivers insensitive to signs of hunger and satiety, or who overmanage feeding may inappropriately restrict or encourage excessive intake. Infrequent breastfeeding can result in lactation insufficiency and infant failure-to-thrive (21, 22, 23).

j) Honey has been implicated as the primary food source of *Clostridium botulinum* during infancy. These spores are extremely resistant to heat and are not destroyed by present methods of processing honey. Botulism in infancy is caused by ingestion of the spores, which germinate into the toxin in the lumen of the bowel (24, 25, 26).

k) Excessive intake of nutrient-poor and high calorie foods and beverages can increase the risk of iron-deficiency anemia and poor growth by displacing nutrients from breastmilk or iron-fortified formula and other more appropriate foods in the infant's diet (27, 28, 29).

Continued on next page

411 Inappropriate Infant Feeding Practices, Continued

Justification (continued)

l) Caffeine is a cerebral, respiratory, cardiac, and central nervous system stimulant. it also acts as a diuretic, is a smooth muscle relaxant, and increases plasma glucose, free fatty acids and gastric secretions. Due to these effects on the body, caffeine is an inappropriate and potentially harmful substance to feed to infants. If infants increase their calorie consumption via high-calorie low-nutrient beverages and foods, the risk of obesity increases (27, 28, 29).

m) Water intoxication can occur if infants are fed excessive amounts of water. Symptoms of the condition include respiratory failure, seizures, and convulsions. A total of 4-8 ounces per day of plain water is appropriate for infants when solid foods are started or in hot weather for formula-fed or partially breastfed babies (27, 28, 29).

Justification for high risk

Not applicable

References

1. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; p. 261.
2. CON, AAP: Pediatric Nutrition Handbook; 1993; pp. 1, 15.
3. AAP Statement on Iron-fortified formula; 1989.
4. CON, AAP: Pediatric Nutrition Handbook; 1998; p 3.
5. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; p. 262.
6. CON, AAP: Pediatric Nutrition Handbook; 1993; p. 20.
7. Fomon, S.: Nutrition of Normal Infants; 1993; pp. 446-447.
8. Pipes, and Trahms: Nutrition in Infancy and Childhood; 1993; p. 100.
9. AAP, CON: The Use of Whole Cow's Milk in Infancy; 1992.

Continued on next page

411 Inappropriate Infant Feeding Practices, Continued

References (continued)

10. Fomon, S.: Nutrition of Normal Infants; 1993; pp. 94-97, 423-424.

11. Pipes and Trahms: Nutrition in Infancy and Childhood; 1993; p. 106

12. Satter, E.: Feeding with Love and Good Sense; 1986; p. 237.

13. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; p. 263.

14. Satter: Feeding with Love and Good Sense; 1986; pp. 235, 422.

15. Pipes and Trahms: Nutrition in Infancy and Childhood; 1993; p. 102.

16. Pipes and Trahms: Nutrition in Infancy and Childhood; 1993; p. 112.

17. Satter: Feeding with Love and Good Sense; 1986, pp. 235, 422.

18. Pipes and Trahms: Nutrition in Infancy and Childhood; 1993; p. 102.

19. Satter: Feeding with Love and Good Sense; 1986; pp. 251-252.

20. Pipes and Trahms: Nutrition in Infancy and Childhood; 1993; p. 104.

21. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; p. 264.

22. Satter: Feeding with Love and Good Sense; 1986; pp. 411-419.

23. Pipes and Trahms: Nutrition in Infancy and Childhood; 1993; pp. 115-116, 118.

24. Satter: Feeding with Love and Good Sense; 1986; pp. 251-252.

25. Pipes and Trahms: Nutrition in Infancy and Childhood; 1993; pp. 104-106.

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411 Inappropriate Infant Feeding Practices, Continued

References (continued)

26. FNS-288: Infant Nutrition and Feeding; 1993; p. 143.

27. Queen and Lang: Handbook of Pediatric Nutrition; 1993; pp. 107-144.

28. Rolfes, DeBruyne, Whitney: Life Span Nutrition: Conception Through Life; 1990, pp. 221-237.

29. AAP, CON: Pediatric Nutrition Handbook; 1993; pp. 205, 263-273.

412 Early Introduction of Solid Foods

Definition/ cut-off value

Addition of solid food(s) into the daily diet before four (<4) months of age.

Participant category and priority level

Category	Priority	High Risk
Infants	IV	N

Documentation

Circle the inappropriate practice on Infant History form.
Enter NRF #412 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

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412 Early Introduction of Solid Foods, Continued

Counseling guidelines

Refer to NRF #425 "Inappropriate Feeding" and/or NRF #902 "Guardian Limited Feeding Skills," if actual caretaking ability is a concern.

Assess caregiver's:

- understanding of healthy infant feeding guidelines

Explain the risk of starting solids too early:

- stresses the baby's immature digestive system
- may set baby up for allergies later in life
- displaces the nutrients in breastmilk or formula

Explain the "right" time to start solids

- exclusively breastfeeding is ideal nutrient to support optimal growth and development for approximately the first 6 months after birth
- however, most infants are physically ready to start solids at 4-6 months

Review basic guidelines for feeding and introducing solids:

- infants must be physically and developmentally ready; cues include:
  - can sit with support
  - holds head up
  - shows interest in your food
  - can move foods from the front to the back of the mouth; doesn't push food out with tongue
  - leans forward for food when hungry; away when full
  - weight has doubled since birth
  - nurses 8 or more times per day or drinks more than 32 ounces formula daily

Provide tips introducing and transitioning to solid foods:

- Relax. Smile. Talk soothingly. Pick a time when you and baby are relaxed and baby is not ravenously hungry.
- let the baby set the pace
- start with a teaspoon or two of food
- use a small spoon with a long handle -- with just a smidge of food on the tip

Suggested handouts

Feeding Your Baby Solid Foods
Infant Feeding Guide
The First 12 Months

Continued on next page

412 Early Introduction of Solid Foods, Continued

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Justification

Before 4 months of age, the infant possesses an extrusion reflex that enables him/her to swallow only liquid foods. Breastmilk or iron-fortified infant formula is all the infant needs.

Gastric secretions, digestive capacity, renal capacity and enzymatic secretions are low, which makes digestion of solids inefficient and potentially harmful. Furthermore, there is the potential for antigens to be developed against solid foods, due to the undigested proteins that may permeate the gut.

If solid foods are introduced before the infant is developmentally ready, breastmilk or iron-fortified formula necessary for optimum growth, is displaced.

Around 4 months of age, the infant is developmentally ready for solid foods when:

- the infant is better able to express certain feeding cues such as turning head to indicate satiation;
- oral and gross motor skills begin to develop that help the infant to take solid foods;
- the extrusion reflex disappears; and
- the infant begins to sit upright and maintain balance.

Justification for high risk

Not applicable

Continued on next page

412 Early Introduction of Solid Foods, Continued

References

1. Rolfes, DeBruyne, Whitney: Life Span Nutrition: Conception Through Life; 1990; pp. 231-237.
2. Fomon, S.: Nutrition of Normal Infants; 1993; pp. 457-458.
3. Queen and Lang: Handbook of Pediatric Nutrition; 1993; pp. 129-131.
4. AAP, CON: Pediatric Nutrition Handbook; 1993; pp. 23-28.
5. American Academy of Pediatrics. Breastfeeding and the Use of Human Milk. *Pediatrics.* 1997; 100: 1035-1039.

414 Low Iron Intake Age 6 Months or Older

Definition/ cut-off value

No routine age-appropriate iron source after 6 months of age, such as:

- iron-fortified cereals
- iron-fortified infant formula (at least 10mg of iron per liter of formula prepared at standard dilution)
- meats
- oral iron supplements

Participant category and priority level

Category	Priority	High Risk
Infants	IV	N

Documentation

Circle the inappropriate practice on Infant History form.
Enter NRF #414 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

Refer to NRF #201 "Anemia" if infant is anemic, NRF #362 "Developmental Delays," NRF #411 "Inappropriate Feeding," and/or NRF #902 "Guardian with Limited Feeding Skills," if caretaking ability is a concern.
If participant is buying low iron formula or cereal with WIC vouchers, counsel on WIC policy regarding these products.
Explain that American Academy of Pediatrics recommends breastmilk or iron fortified formula for all infants under 1 year of age.
Assess understanding of healthy infant feeding guidelines.

Continued on next page

414 Low Iron Intake Age 6 Months or Older, Continued

Counseling guidelines, (continued)

Review the reasons why iron is so important:

- a full-term baby's iron stores that last only 4-6 months
- premature and low birth weight infants are born with even lower iron stores, often depleted by 2-3 months of age.
- iron needs are increased with rapid growth and increased physical activity
- body stores are simply not enough to meet the baby's increasing needs, therefore the infant must receive a dependable source of iron to prevent iron deficiency anemia
  - anemia is one of the most preventable and treatable nutritional deficiencies
- iron deficiency anemia may irreparably hurt healthy brain development
- iron deficiency anemia is also associated with:
  - a decreased ability to "stay healthy"
  - apathy (i.e. - without emotion, sluggish; an attitude of indifference)
  - short attention span
  - irritability
- review sources of iron, emphasizing WIC foods:
  - breastmilk is nutritionally complete until about 4-6 months of age when baby's stores run out
    - breastfed preemies may need iron supplementation earlier
    - discuss with baby's mom's health care provider
  - iron-fortified formula (for formula-fed babies) -- WIC food
  - iron-fortified baby cereal -- WIC food
  - plain, strained meats after 9 months (plain has more iron than combinations)
  - soft-cooked legumes after 9 months -- WIC food
  - WIC juices (after 6 months) with vitamin C help increase body's use of iron

Review ways in which caregiver may include iron sources in baby's diet:

- make sure baby's formula is iron-fortified, if formula fed
- start WIC iron-fortified baby cereals
- have baby drink WIC juice (in a cup, not a bottle) with cereal (vitamin C in juice increases absorption of iron)
- provide recipes using WIC beans; using with infants after 9 months of age

Continued on next page

414 Low Iron Intake Age 6 Months or Older, Continued

Suggested handouts

Infant Feeding Guide
The First 12 Months

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Justification

The full-term infant is born with iron stores to last for the first 4-6 months. Preterm and low birth weight infants are born with lower iron stores, which are often depleted by 2-3 months of age. Rapid growth and increased physical activity significantly increase the need for iron and utilizes iron stores. Body stores are insufficient to meet the increased iron needs, making it necessary for the infant to receive a dependable source of iron to prevent iron deficiency anemia. Iron deficiency anemia is associated with cognitive and psychomotor impairments that may be irreversible. Iron deficiency anemia is also associated with decreased immune function, apathy, short attention span, and irritability.

Justification for high risk

Not applicable

References

1. Fomon, S.: Nutrition of Normal Infants; 1993; pp. 246-256.
2. Queen and Lang: Handbook of Pediatric Nutrition; 1993; pp. 114-115, 127-128.
3. AAP, CON: Pediatric Nutrition Handbook; 1993; pp. 231-235.
4. CDC: Recommendations to Prevent and Control Iron Deficiency in the United States; MMWR; April 1998; pp. 18-21.
5. WIC Program Regulations: Section 246.10 (c)(1)(i).

415 Improper Formula Dilution

Definition/ cut-off value

Routine overdilution or underdilution of formula (failure to follow manufacturer's dilution instructions or specific instructions accompanying a prescription).

Participant category and priority level

Category	Priority	High Risk
Infants	IV	N

Documentation

Circle the inappropriate practice on Infant History form
Enter NRF #415 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

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415 Improper Formula Dilution, Continued

Counseling guidelines

Refer to NRFs #103 "Weight for Height = 10th," #134 "Failure to Thrive," #135 "Inadequate Growth," #411 "Inappropriate Feeding," and/or #902 Guardian with Limited Feeding Skills," if medical or actual caretaking ability is a concern, or for any related concerns about infant's actual growth.

Assess who actually mixes the formula.

- if it's mother/caregiver, assess understand of proper mixing guidelines.

Explain the consequences of over- or underdiluting baby's formula:

- Underdilution:
  - adding too little water concentrates the formula too much
  - makes it hard for the baby to digest
  - supplies too much food at one feeding and not enough fluid to prevent dehydration
  - can lead to obesity and/or kidney problems
- Overdilution:
  - adding too much water means the baby will not get enough nutrients or energy needed for healthy growth and development
    - is especially serious if the infant is under 6 weeks of age
  - the baby over 6 weeks of age simply demands a larger volume of diluted formula to satisfy his energy needs
    - the disadvantage to this is that it gets the baby used to taking great quantities of food (i.e. - a bad habit to carry into adulthood)
  - could possibly lead to water intoxication
  - baby may be fussy because he/she is hungry

Review proper feeding techniques with caregiver (refer to the Product Guide for exact mixing instructions.)

- remind the caregiver:
  - don't experiment. Follow directions!
  - use the scoop that came with the formula
  - after filling the scoop, carefully follow the direction on the can
    - some directions read "level it off..." while others say "tap the scoop..."

Have caregiver demonstrate understanding of procedure by mixing a bottle.

Continued on next page

415 Improper Formula Dilution, Continued

Suggested handouts

Infant Feeding Guide
The First 12 Months

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Justification

Overdilution can result in water intoxication resulting in hyponatremia, irritability, coma, inadequate nutrient intake, failure to thrive, and/or poor growth.

Underdilution of formula increases calories, protein, and solutes presented to the kidney for excretion, and can result in hypernatremia, tetany, and obesity. Dehydration and metabolic acidosis can occur.

Powdered formulas vary in density so manufacturer's scoops are formula specific to assure correct dilution. One clue for staff to identify incorrect formula preparation is to determine if the parent/caregiver is using the correct manufacturer's scoop to prepare formula.

Justification for high risk

Not applicable

References

1. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; pp. 263-264.

2. Pipes and Trahms: Nutrition in Infancy and Childhood; 1993; 99.

3. Fomon: Nutrition of Normal Infants; 1993; pp. 432-433.

417 Poor Bottle Sanitation

Definition/ cut-off value

Lack of sanitation in preparation, handling, and storage of formula or expressed breastmilk as evidenced by:

a) Limited knowledge on how to:
- prepare bottles, nipples, and/or formula;
- handle prepared formula and/or expressed breastmilk; and/or
- store prepared or opened formula and/or expressed breastmilk.

b) Limited or no access to:
- a safe water supply;
- a stove for sterilization; and/or
- a refrigerator or freezer (i.e., if expressed breastmilk is to be stored for more than 1-2 days).

c) Failure to properly prepare, handle, and store bottles or storage containers of formula or expressed breastmilk.

Participant category and priority level

Category	Priority	High Risk
Infants	IV	N

Documentation

Circle the inappropriate practice on Infant History form.
Enter NRF #417 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Continued on next page

417 Poor Bottle Sanitation, Continued

Counseling guidelines

Refer to NRFs #342 "GI Disorders,", #352 "Infectious Diseases," #425 "Inappropriate Feeding," and/or #902 "Guardian with Limited Feeding Skills," if medical or actual caretaking ability is a concern.

Assess caregivers limited or no access to:

- safe water supply: tailor food package to use ready-to-feed formula if safe water or cooking facilities (for sterilizing bottles) are unavailable.
- a stove for sterilization and/or
- a refrigerator (for breastmilk or formula) or freezer if expressed breastmilk is to be stored for more than 1-2 days

Assess caregiver knowledge/understanding of:

- how to prepare bottles, nipples and/or formula
- how to handle prepared formula and/or expressed breastmilk
- how to store prepared or opened formula and/or expressed breastmilk

Explain the potential risks involved in the improper preparation and handling of bottles:

- babies have less immunity to bacteria and are more susceptible to
- food-borne illnesses
- the risk of dehydration increases if the baby has a food infection which is accompanied by vomiting and diarrhea

Review basic steps involved in preparation and handling of bottles:

- wash hands prior to formula preparation
- bacteria need 3 things to grow: food, water, and proper temperature
  - goal is to eliminate 1, 2, or all 3
- use plenty of hot, soapy water to wash hands, work area (sink, bottle brush), bottles and nipples
- when possible, wash bottles right away. Makes them easier to clean but...
  - dishwashers are fine
  - be careful with bottles with "cute" shapes - are often hard to clean
- throw out cracked or chipped bottles
  - could break or spill formula on baby
  - bacteria collects in the cracks
- replace nipples once they become gummy or cracked with age
- use disposable bottle bags once, then toss

Continued on next page

417 Poor Bottle Sanitation, Continued

Counseling guidelines, (continued)

Explain what is considered **safe** handling and storage of prepared formula:

- prepared formula can be held at room temperature for up to 2 hours or no longer than recommended by the manufacturer
- formula can be held in the refrigerator for up to 48 hours
- cover and immediately refrigerate any prefilled bottles and unused liquid formula
- any formula that has been in the bottle can be kept for up to one hour after the start of the feeding
- always discard leftover formula in a bottle after the feeding is over; do not use it for another feeding
- if unsure of participant's comprehension, have them demonstrate mixing formula when possible

Explain what is considered safe handling and storage of expressed breastmilk:

- expressed breastmilk can be held in the refrigerator for up to 72 hours
- it is not considered safe to add fresh breastmilk to already frozen breastmilk in a storage container
- previously frozen breastmilk can be thawed in a refrigerator and held in a refrigerator for up to 24 hours
- always discard leftover breastmilk in a bottle after the feeding is over; do not use it for another feeding.

Suggested handouts

Infant Feeding Guide

Required follow-up at second contact

Appropriate nutrition education at each visit.

Continued on next page

417 Poor Bottle Sanitation, Continued

Justification

Infant formula must be properly prepared in a sanitary manner in order to be safe for consumption. Further, prepared infant formula and expressed breastmilk are perishable foods which must be handled and stored properly in order to be safe for consumption.

Published guidelines on the handling and storage of infant formula indicate that it is unsafe to feed an infant prepared formula which, for example:

- has been held at room temperature longer than 2 hours or longer than recommended by the manufacturer;
- has been held in the refrigerator longer than 48 hours;
- remains in a bottle one hour after the start of feeding; and/or
- remains in a bottle from an earlier feeding.

Lack of sanitation may cause gastrointestinal infection. Most babies who are hospitalized for vomiting and diarrhea are bottle-fed. This has often been attributed to the improper handling of formula rather than sensitivities to the formula.

Manufacturers' instructions vary in the length of time it is considered safe to hold prepared infant formula without refrigeration before bacterial growth accelerates to the extent that the infant is placed at risk.

Published guidelines on the handling and storage of breastmilk may differ among pediatric nutrition authorities (3, 4, 5, 6). However, the following breastmilk feeding, handling, and storage practices, for example, are considered inappropriate and unsafe by the American Academy of
Pediatrics (6):

- feeding fresh breastmilk held in the refrigerator fro more than 72 hours;
- adding fresh breastmilk to already frozen breastmilk in a storage container;
- feeding previously frozen breastmilk thawed in the refrigerator that has been refrigerated for more then 24 hours, and/or
- saving breastmilk from a used bottle for use at another feeding.

Continued on next page

417 Poor Bottle Sanitation, Continued

Justification (continued)

Although there are variations in the recommended time lengths for breastmilk to be held at room temperature or stored in the refrigerator or freezer, safety is more likely to be assured by using the more conservative guidelines.

The water used to prepare concentrated or powdered infant formula and prepare bottles and nipples must be safe for consumption. Water used for formula preparation which is contaminated with toxic substances (such as nitrate at a concentration above 10 milligrams per liter, lead, or pesticides) poses a hazard to an infant's health and should NOT be used.

Justification for high risk

Not applicable

References

1. Satter, E. Child of Mine. 1986; Palo Alto, CA: Bull Publishing Co.; p. 152-153.

2. Institute of Medicine: WIC Nutrition Risk Criteria; 1996; pp. 266.

3. FNS-288: Infant Nutrition and Feeding; 1993; pp. 21-23, 53-55, 77-78.

4. Program Aid 1516: Breastfed Babies Welcome Here; 1995; pp. 12-15.

5. Lawrence, Ruth A.: Breastfeeding: A Guide for the Medical Profession. Fifth Edition. St. Louis, MO: Mosby, 1999

6. American Academy of Pediatrics: A Woman's Guide to Breastfeeding; 1999, pp. 13-14.

419 Tooth Decay Risk - Bottle

Definition/ cut-off value

a) Routine use of the bottle to feed liquids other than breastmilk, formula, or water. This includes:
- fruit juice
- soda
- soft drinks
- gelatin water
- corn syrup solutions
- milk
- other sugar-containing beverages

b) Allowing the infant/child to fall asleep at naps or bedtime with the bottle.
c) Allowing the infant/child to use the bottle without restriction
(e.g., walking around with a bottle) or as a pacifier.
d) Propping the bottle.
e) Use of a bottle for feeding or drinking beyond 14 months of age.

Participant category and priority level

Category	Priority	High Risk
Infants	IV	N
Children	V	N

Documentation

Circle the inappropriate practice on Infant History form.
Enter NRF #419 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

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419 Tooth Decay Risk - Bottle, Continued

Counseling guidelines

Refer to dentist, as appropriate.
Refer to NRFs #381 "Dental Problems," #362 "Developmental Delays," #411/425 "Inappropriate Feeding" and/or #902 "Guardian with Limited Feeding Skills," if medical or actual caretaking ability are concerns.
Assess caregiver's understanding of bottle feeding guidelines.
Review the only fluids that belong in a bottle:

- breastmilk
- formula
- water

Review fluids that do not belong in the bottle, ever:

- fruit juice
- soda and soft drinks
- milk
- gelatin water
- corn syrup solutions
- any other sugar-containing beverages

view other factors that increase the risk of tooth decay:

- allowing the child to fall asleep at bedtime or naps with a bottle
- allowing the child to use the bottle without restriction
- propping the bottle

Review the risks of using the bottle to feed fluids other than breastmilk, formula or water:

- development of "bottle mouth," which is rampant tooth decay, especially of the upper teeth, that occurs when an infant/child goes to sleep with a bottle filled with milk, juice, or other caloric liquid.
- the teeth are bathed in the liquid that pools in his/her mouth as he/she sleeps, leading to:
  - toothaches and decay
  - costly dental treatment
  - loss of primary teeth
- developmental lags in eating and chewing

Continued on next page

419 Tooth Decay Risk - Bottle, Continued

Counseling guidelines, (continued)

- risk of decay in the permanent teeth (if continues past the usual weaning period)
- propping bottles:
  - deprives infants of vital human touch and nurturing
  - causes ear infections (more doctor appointments), choking and decay

Review basic weaning from the bottle guidelines:

- a good age range to start teaching infants to drink from a cup is between 6-9 months. Because:
  - babies begin to be able to drink from a cup with a little assistance
  - intake of solids increases
  - signs of independence appear and independent feeding begins
- A good time to wean from a bottle is between the age of 10-12 months.
  - after 13 months a toddler may be more attached to bottle, which makes weaning more difficult.

Suggested handouts

Weaning from the Bottle Fed Baby
If Your Child is One, it is Time to Break the Bottle Habit

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Continued on next page

419 Tooth Decay Risk - Bottle, Continued

Justification

Fermentation of carbohydrates on surface of the tooth produces organic acids that demineralize and destroy enamel, with subsequent tooth decay. Generally, many teeth are involved, decay develops rapidly, and occurs on surfaces normally thought to be at low risk for decay. Maxillary anterior teeth are affected first and most severely because of prolonged repeated exposure, frequently to the extent that extraction of these teeth is required in children as young as 18 months.

If inappropriate use of the bottle persists, child is at risk for toothaches, costly dental treatment, loss of primary teeth, and developmental lags on eating and chewing. If this continues beyond the usual weaning period, there is a risk of decay to permanent teeth.

Propping the bottle deprives infants of vital human contact and nurturing which makes them feel secure. It can cause: ear infections, because of fluid entering the middle ear and not draining properly; choking from liquid flowing into the lungs; and tooth decay from prolonged exposure to carbohydrate-containing liquids.

Pediatric dentists recommend that parents be encouraged to have infants drink from a cup as they approach their first birthday; to wean infants from the bottle at 12-14 months of age (12).

Justification for high risk

Not applicable

Continued on next page

419 Tooth Decay Risk - Bottle, Continued

References

1. Ellyn Satter, R.D.: Child of Mine; 1986, pp. 150-153.

2. Derkson and Ponti: Nursing Bottle Syndrome: Prevalence and Etiology in a Non-fluoridated City; J. Canadian Dental Association; 1982, 48, pp. 389-393.

3. Dilley et al: Prolonged Nursing Habit: A profile of Patients and Other Families, J. Dent Child; 1980; 47, pp. 102-108.

4. Fomon: Nutrition of Normal Infants; 1993.

5. Ripa, LW: Nursing Habits and Dental Decay in Infants: Nursing Bottle Caries; 1978; 45, pp. 274-275.

6. AAP, CON: Pediatric Nutrition Handbook; 1985, pp. 30, 168.

7. Pipes and Trahms: Nutrition in Infancy and Childhood; 1993; pp. 114-115.

8. Sweeney, E.A., Cabrera, J., Urrutia,. J., and Mata, L.: Factors associated with linear hypoplasia of human deciduous incisors. Journal of Dental Research; 1969; 48, pp. 1275.

9. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; pp. 265, 268.

10. AAPD: Baby Bottle Tooth Decay, Pediatric Dentistry; Vol. 16, #7; 1994-95; p. 26.

11. FNS-288: Infant Nutrition and Feeding; 1993; pp. 47-49.

12. American Academy of Pediatric Dentistry: Baby Bottle Tooth Decay/Early Childhood Caries; Pediatric Dentistry; Vol. 19; #7; 1997-98: p. 24.

420 Excessive Caffeine Intake

Definition/ cut-off value

Routine intake of 3 cups of coffee, or the caffeine equivalent from other caffeine-containing beverages.

Participant category and priority level

Category	Priority	High Risk
Breastfeeding	IV	N

Documentation

Circle the area of the Food Frequency form that describes the excessive caffeine intake.
Enter NRF #420 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

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420 Excessive Caffeine Intake, Continued

Counseling guidelines

Explain to the mother that caffeine can accumulate in the infant and cause wakefulness, hyperactivity or irritability.
Mother and children differ greatly in their sensitivity to caffeine.
If caffeine stimulation is causing symptoms in baby, they should subside within a few days to a week after elimination of caffeine.
There are no known long term consequences to caffeine intake.
Recommend that she limit her daily intake of caffeine-containing beverages to less than:

- 3 cups regular coffee
- 6 cups regular brewed tea
- 50 ounces of cola beverage

Educate the mother to look for sources of caffeine in other forms by reading labels:

- soft drinks other than colas
- pain relievers; *Midol, Excedrin,* etc.
- cold remedies
- diuretics
- weight control aids
- stimulants
- chocolate contains theobromine, which is similar to caffeine and can produce the same effect.

Suggested handouts

I'm Breastfeeding - What Should I Eat?

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Continued on next page

420 Excessive Caffeine Intake, Continued

Justification

Caffeine consumed by the mother is transferred into breastmilk. The equivalent amount of caffeine found in modest amounts of regular coffee daily is unlikely to have a deleterious effect on the infant. When a mother ingests larger amounts of caffeine (the equivalent of 6 or more cups of coffee a day), caffeine can accumulate in the infant, causing wakefulness, hyperactivity, or irritability. Evidence from a study in Costa Rica showed that maternal consumption of 3 or more cups of coffee daily can affect iron concentrations in milk and infant iron status at one month of age, but this nutritional effect is probably due to compounds in coffee other than caffeine; i.e., decaffeinated beverages of the same type would be likely to have the same effect.

Justification for high risk

Not applicable

References

1. Institute of Medicine: Nutrition During Lactation; 1991; pp. 15, and 176.
2. Lawrence, R: Breastfeeding - A Guide for the Medical Profession; 1994; p. 342.
3. Williams, S.: Nutrition and Diet Therapy; 1993; p. A-67.

421 Pica

Definition/ cut-off value

Current or recent craving for or ingestion of nonfood items:

- clay
- starch (laundry and cornstarch)
- dirt
- ashes
- paint chips
- large quantities of ice
- baking soda

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Breastfeeding	IV	N
Postpartum	VI	N
Children	V	N

Documentation

Circle condition on the Medical History form.
Enter NRF #421 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

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421 Pica, Continued

Counseling guidelines

Refer to health care provider/physician/lead treatment center to assess potential medical effects of pica and for comprehensive follow-up, if appropriate.
Refer to NRFs #201 "Anemia," #211 "Elevated Lead Levels," #341 "Nutrient Deficit Disease," #342 "GI Disorders," #352 "Infectious Disease," #358 "Eating Disorders," #425 "Inappropriate Feeding," or #902 "Guardian with Limited Feeding Skills," if related issues arise.
Tailor the food package, as needed, to encourage healthy eating.
Define pica:

- a craving for non-food substances such as clay, starch (laundry and cornstarch), dirt, ashes, paint chips, large quantities of ice, and/or baking soda
- thought to be due to hormonal changes when it occurs during pregnancy, although the exact cause is known

Pica has been linked to:

- a variety of poor pregnancy outcomes
- lead poisoning
  - consumption of lead-based paint chips
- anemia
- excess calories or displacement of calories
- gastric and small bowel obstruction
- parasitic infection
- nutrient deficiencies, if pica inhibits absorption or displaces nutrient-dense foods

Review participant's present eating habits:

- assess participant's understanding of healthy eating guidelines

Review healthy eating practices individualized to participant's individual need.

Continued on next page

421 Pica, Continued

Counseling guidelines, (continued)

Help participant strategize ways to eliminate pica behaviors:

- where/when possible, eliminate the source of pica items
- have participant make an actual list of other favorite foods to replace the craved item
- have participant pinpoint the time(s) of day when craving(s) hit and plan a healthy snack, which is readily available, for these times
- encourage regularly scheduled meals/snacks to avoid periods of hunger, which might invite the craving behavior

Encourage consumption of WIC foods high in iron (cereal, beans) and vitamin C (juice) if anemic. Also promote WIC calcium sources (milk, cheese, beans), in addition to iron and vitamin C sources, to help reduce the absorption of lead, if paint chips are a pica item.

Encourage adequate intake of calories, magnesium, zinc, thiamin, and vitamin E, as they may also help reduce the absorption of lead, if paint chips are a pica item.

If anemic, tailor food package to "anemia package."

Recommend follow-up blood lead level testing within 12 months, if elevated.

Suggested handouts

Daily Food Guide - Children/Pregnant/Breastfeeding/Postpartum
What to Eat When You Are Pregnant
I'm Breastfeeding - What Should I Eat?

Follow up and assessment guidelines

If pregnant, weight gain plotted and assessed at each clinic visit.
Appropriate nutrition education at each visit.

Continued on next page

421 Pica, Continued

Justification

Pica is the craving for and eating of nonfood substances. Pica is linked to lead poisoning, anemia, excess calories or displacement of calories, gastric and small bowel obstruction, as well as parasitic infection. It may also contribute to other nutrient deficiencies by either inhibiting absorption or by displacing nutrient-dense foods. It has been associated with a variety of poor pregnancy outcomes in women and lead poisoning in children.

Infants are not identified to be at risk for pica because developmentally, infants indiscriminately put numerous items hand-to-mouth.

WIC nutrition education and food can benefit the client by modifying the behavior.

Justification for high risk

Not applicable

References

Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; pp. 270-272.

422 Diet, Inappropriate

Definition/ cut-off value

Use of this NRF is limited to 6 certification periods.

Women and Children: The table below specified the recommended weekly number of servings for each WIC nutrient/food group, assessed using the Utah WIC food frequency questionnaire, per procedures in the Dietary Assessment Module. A score under the minimum listed for the participant's status places them at risk for inadequate diet.

Food/ Nutrient Group	Pregnant	Breastfeeding	Postpartum	Children 1-3 years	Children 4-5 years
Bread, Cereal, Rice & Pasta	42	42	42	42	42
Vitamin C	12	16	10	7	7
Fruits	14	14	14	14	14
Vitamin A	7	10	7	7	7
Vegetables	21	21	21	21	21
Milk, Cheese and Yogurt	21 28*	21 28*	14 21	21	21
Meat, Poultry, Fish, Dry Beans, Eggs & Nuts	42	42	35	31	42
Iron	21** 42***	21	21	21	21

*Teens
**With Prenatal iron supplement
***Without Prenatal iron supplement

Alternate definition: dietary deficiency other than WIC nutrients. Requires documentation of dietary analysis method used and results obtained.

Continued on next page

422 Diet, Inappropriate, Continued

Infants: inadequate diet includes any of the following:

- breastfed infant whose mother qualifies for inadequate diet
- excessive formula intake; or inadequate breastmilk or formula intake. Defined in the following table:

Breastfed without formula supplements*	
< 4 months	< 8 feedings in 24 hours
= 4 months	< 5 feedings in 24 hours
Formula fed, inadequate amount	
< 4 months	< 18 ounces in 24 hours
= 4 months	< 24 ounces in 24 hours
Formula fed, excessive amount	
< 4 months	> 40 ounces
4 to 6.9 months	> 45 ounces
7 to 9.9 months	> 37 ounces
= 10 months	> 31 ounces

*For the breastfed infant who receives supplemental formula, use number of feedings in 24 hours, by both breast and bottle/cup.

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Breastfeeding	IV	N
Postpartum	VI	N
Infants	IV	N
Children	V	N

Documentation

Complete and score appropriate diet history form. Circle the nutrient/food groups/feeding practices that are deficient.
Enter NRF #422 in screen 106,
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Continued on next page

422 Diet, Inappropriate, Continued

Parameters for auto assign	Not auto assigned. Must be manually selected.
Counseling guidelines	Discuss methods to achieve adequate diet and feeding practices appropriate for the nutritional needs of pregnant, postpartum and breastfeeding women, infants and children under the age of 5. Emphasize the relationship of sound nutrition to the total concept of good health. Assist the participant in making positive changes in food habits to improve nutritional status and prevent nutrition related problems through the use of the supplemental and other nutritious foods. Use the appropriate WIC nutrition education materials for reinforcing the nutritional recommendations for each individual WIC participant.
Suggested handouts	Daily Food Guide - Children/Pregnant/Breastfeeding/Postpartum Infant Feeding Guide
Follow up and assessment guidelines	If pregnant, weight gain plotted and assessed at each clinic visit. Appropriate nutrition education at each visit.

Continued on next page

422 Diet, Inappropriate, Continued

Justification

The dietary assessment establishes a base of information about the participants' lifestyle and eating habits and makes it possible for the CPA to appropriately assess and provide realistic counseling.

Women, children and infants not taking in an adequate diet are at risk for nutrient deficiencies, malnutrition and poor growth and development.

The Infant History form includes a number of questions, a 24 hour recall and a food frequency in order to obtain both qualitative and quantitative dietary information. The CPA must evaluate all components of the form to ascertain if the infant is at risk for inadequate diet.

For women and children, a food frequency is used to obtain a typical food intake over a month. The Utah Food Frequency form determines the adequacy of the diet in terms of the WIC nutrients (iron, vitamins A & C) and food groups (Food Guide Pyramid). It does not assess how much is eaten daily, i.e. number of calories. In order to obtain this a 24 hour recall will need to be evaluated.

Justification for high risk

Not applicable

References

1. Utah WIC Program Dietary Assessment Module, Revised 2/95.

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies

Definition/ cut-off value

- Daily intake of inappropriate or excessive amounts (>100% RDA) of any dietary supplements with potentially harmful consequences not prescribed by a physician.
  - single or multi-vitamin supplements
  - single or multi-mineral supplements
- Routine use of herbal remedies. Herbal remedies may be in the form of capsules, tablets, liquids, teas, or powders.

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Breastfeeding	IV	N
Postpartum	VI	N
Infants	IV	N
Children	V	N

Documentation

Circle condition on Medical History form.
Enter NRF #423 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Counseling guidelines

Find out:

- what are they taking?
- how much and how often are they taking it?
- why are they taking it? What are they hoping it will do?
- how did they find out about it and who recommended it?
- what side effects are they having? How are they feeling?

If taking vitamin or mineral supplements, counsel to consume no more than 100% of the RDA for any one nutrient unless prescribed by a physician

If taking herbal supplements, inform them that herbal remedies:

- are drugs
- are not regulated and not well-studied
- can vary in potency
- may not actually contain what the label says they contain
- can interact with medications and nutrients
- can be contaminated with compounds such as lead, mercury, arsenic, gold, cadmium, ibuprofen, benzodiazepenes, and steroids
- can cause health changes such as insomnia, headaches, seizures, irregular heartbeat, stroke, heart attack, and death

Refer to Pregnancy Riskline.

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Dietary Reference Intakes: Recommended Intakes for Individuals and Tolerable Upper Intake Levels (UL) of Vitamins and Minerals

Definitions

Dietary Reference Intakes (DRI) include the following types of values, as indicated in the table below. RDAs and AIs may both be used as goals for individual intake.

- Recommended Dietary Allowance (RDA): the average daily intake level that is sufficient to meet the nutrient requirement of nearly all (97 to 98 percent) healthy individuals in a particular life stage and gender group
- Adequate Intake (AI): a recommended intake value based on observed or experimentally determined approximations or estimates of nutrient intake by a group (or groups) of healthy people that are assumed to be adequate; used when an RDA cannot be determined. For healthy breastfed infants, the AI is the mean intake.
- Tolerable Upper Intake Level (UL): the highest level of daily nutrient intake that is likely to pose no risk of adverse health effects for almost all individuals in the general population. As intake increases above the UL, the potential risk of adverse effects increases.

  Note: ND indicates not determinable due to lack of data of adverse effects in this age group and concern with regard to lack of ability to handle excess amounts. Source of intake should be from food only to prevent high levels of intake.

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Dietary Reference Intakes

Nutrient	Women 19-50 yrs	Pregnant	Breastfeeding	Infant	Child	Signs of Toxicity
Vitamin A µg RAE/d	(RDA) 700	(RDA) 750≤18 yrs 770>18 yrs	(RDA) 1200 ≤18 yrs 1300 >18 yrs	(AI) 400 ≤ 6 mo 500 >6 mo	(RDA) 300 age 1-3 400 age 4-6	Headache Vomiting Double vision Hair loss Dryness of mucous membranes Skin shedding Bone abnormalities Liver damage Spontaneous abortion Birth defects (malformation of cranium, face, heart, thymus, and Central Nervous System)
	(UL) 3000	(UL) 2800≤18 yrs 3000 >18 yrs	(UL) 2800 ≤18 yrs 3000 >18 yrs	(UL) 600	(UL) 600 age 1-3 900 age 4-6	
	Note: upper limit as preformed vitamin A only (Retinoids). No UL established for carotenoids.					
Vitamin C mg/d	(RDA) 75	(RDA) 80 ≤18 yrs 85 >18 yrs	(RDA) 115 ≤18 yrs 120 >18 yrs	(AI) 40 ≤6 mos 50 >6 mos	RDA 15 age 1-3 25 age 4-8	None
	(UL) 2000	(UL) 1800 ≤18 yrs 2000 >18 yrs	(UL) 1800 ≤18 yrs 2000 >18 yrs	(UL) ND	(UL) 400 age 1-3 650 age 4-8	
Vitamin D µg/d	(AI) 5	(AI) 5	(AI) 5	(AI) 5	(AI) 5	Hypercalcemia Hypercalciuria Leading to deposition of calcium in soft tissues & irreversible renal and cardiovascular damage
	Note: AI refers to recommended intake in the absence of adequate exposure to sunlight					
	(UL) 50	(UL) 50	(UL) 50	(UL) 25	(UL) 50	
Vitamin E mg /d	(RDA) 15	(RDA) 15	(RDA) 19	(AI) 4 ≤6 mos 5 >6 mos	(RDA) 6 age 1-3 7 age 4-8	None. Compared with other fat-soluble vitamins, vitamin E is relatively non-toxic
	(UL) 1000	(UL) 800≤18 yrs 1000 >18 yrs	(UL) 800≤18 yrs 1000 >18 yrs	(UL) ND	(UL) 200 age 1-3 300 age 4-8	
	Note: UL applies to synthetic forms of α-tocopherol from supplements, fortified foods, or a combination of the two.					

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Dietary Reference Intakes

Nutrient	Women 19-50 yrs	Pregnant	Breastfeeding	Infant	Child	Signs of Toxicity
Vitamin K µg/d	(AI) 90	(AI) 75 ≤18 yrs 90 >18 yrs	(AI) 75 ≤18 yrs 90 >18 yrs	(AI) 2.0 ≤6 mos 2.5 >6 mos	(AI) 30 age 1-3 55 age 4-8	None for phylloquinone Menadione may cause: hemolytic anemia hyperbilirubinemia kernicterus in the newborn because of its interaction with sulfhydryl groups
	(UL) ND	(UL) ND	(UL) ND	(UL) ND	(UL) ND	
Thiamin (vitamin B1) mg/d	(RDA) 1.1	(RDA) 1.4	(RDA) 1.4	(AI) 0.2 ≤6 mos 0.3 >6 mos	(RDA) 0.5 age 1-3 0.6 age 4-8	There is no evidence of thiamin toxicity by oral administration
	(UL) ND	(UL) ND	(UL) ND	(UL) ND	(UL) ND	
Riboflavin (vitamin B_2) mg/d	(RDA) 1.1	(RDA) 1.4	(RDA) 1.6	(AI) 0.3 ≤6 mos 0.4 >6 mos	(RDA) 0.5 age 1-3 0.6 age 4-8	No cases of toxicity from ingestion of riboflavin have been reported, since the capacity of the GI tract to absorb riboflavin is rather limited.
	(UL) ND	(UL) ND	(UL) ND	(UL) ND	(UL) ND	
Niacin (vitamin B_3) mg/d	(RDA) 14	(RDA) 18	(RDA) 17	(AI) 2 ≤6 mos 4 >6 mos	(RDA) 6 age 1-3 8 age 4-8	Vascular dilation flushing increased utilization of muscle glycogen decreased serum lipids decreased mobilization of fatty acids
	(UL) 35	(UL) 30≤18 yrs 35 >18 yrs	(UL) 30≤18 yrs 35 >18 yrs	(UL) ND	(UL) 10 age 1-3 15 age 4-8	
	Note: UL applies to synthetic forms obtained from supplements, fortified foods, or a combination of the two.					
Vitamin B_6 (Pyridoxine) mg/d	(RDA) 1.3	(RDA) 1.9	(RDA) 2.0	(AI) 0.1 ≤6 mos 0.3 >6 mos	(RDA) 0.5 age 1-3 0.6 age 4-8	Toxicity of vitamin B_6 is low, however if large doses are taken over months or years, may develop: ataxia severe sensory neuropathy
	(UL) 100	(UL) 80≤18 yrs 100 >18 yrs	(UL) 80≤18 yrs 100 >18 yrs	(UL) ND	(UL) 30 age 1-3 40 age 4-8	

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Dietary Reference Intakes

Nutrient	Women 19-50 yrs	Pregnant	Breastfeeding	Infant	Child 1-6 years	Signs of Toxicity
Folate µg/d	(RDA) 400	(RDA) 600	(RDA) 500	(AI) 65 ≤6 mos 80 >6 mos	(RDA) 150 age 1-3 200 age 4-8	Very large doses of folic acid (100 or more times RDA) may precipitate convulsions in persons whose epilepsy is controlled by phenytonin. In laboratory animals, large doses of folic acid have caused kidney damage, but the same effects have not been reported in humans.
	(UL) 1000	(UL) 800 ≤18 yrs 1000>18yrs	(UL) 800 ≤18 yrs 1000>18yrs	(UL) ND	(UL) 300 age 1-3 400 age 4-8	
	Note: UL applies to synthetic forms obtained from supplements, fortified foods, or a combination of the two.					
Vitamin B_{12} (Cobalamin) µg/d	(AI) 2.4	(AI) 2.6	(AI) 2.8	(AI) 0.4 ≤6 mos 0.5 >6 mos	(AI) 0.9 age 1-3 1.2 age 4-8	No toxicity has been reported from oral ingestion of up to 100 µg per day
	(UL) ND	(UL) ND	(UL) ND	(UL) ND	(UL) ND	
Pantothenic Acid mg/d	(AI) 5	(AI) 6	(AI) 7	(AI) 1.7 ≤ 6 mo 1.8 >6 mo	(AI) 2 age 1-3 3 age 4-8	No reports of adverse effects of oral pantothenic acid in humans or animals
	(UL) ND	(UL) ND	(UL) ND	(UL) ND	(UL) ND	
Biotin µg/d	(AI) 30	(AI) 30	(AI) 35	(AI) 5 ≤6 mos 6 >6 mos	(AI) 8 age 1-3 12 age 4-8	No reports of adverse effects of oral biotin in humans or animals
	(UL) ND	(UL) ND	(UL) ND	(UL) ND	(UL) ND	

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Dietary Reference Intakes

Nutrient	Women 19-50 yrs	Pregnant	Breastfeeding	Infant	Child	Signs of Toxicity
Choline mg/d	(AI) 425	(AI) 450	(AI) 550	(AI) 125 ≤6 mos 150 >6 mos	(AI) 200 age 1-3 250 age 4-8	High doses are associated with fishy body odor, sweating, vomiting, salivation, depression, hypotension, and hepatotoxicity in humans. Animal studies suggest possible growth suppression. Individuals with trimethylaminuria, renal disease, liver disease, depression and Parkinson's disease may have increased susceptibility to adverse effects of choline.
	(UL) 3.5	(UL) 3.0 ≤18yr 3.5 >18 yr	(UL) 3.0 ≤18yr 3.5 >18 yr	(UL) ND	(UL) 1.0	
Calcium mg/d	(AI) 1000	(AI) 1300 ≤18yr 1000 >18 yr	(AI) 1300 ≤18yr 1000 >18 yr	(AI) 210 ≤6 mos 270 >6 mos	(AI) 500 age 1-3 800 age 4-6	No adverse effects have been observed up to 2500 mg/day. Extremely high levels may lead to: constipation, urinary stone formation, hypercalciuria, hypercalcemia, deterioration in renal function, inhibited absorption of iron, zinc, and other essential minerals
	(UL) 2500	(UL) 2500	(UL) 2500	(UL) ND	(UL) 2500	
Chromium µg/d	(AI) 25	(AI) 29 ≤ 18 yr 30 > 18 yr	(AI) 44 ≤ 18 yr 45 > 18 yr	(AI) 0.2 ≤6 mos 5.5 >6 mos	(AI) 11 age 1-3 15 age 4-8	Possible renal, hepatic, reproductive and DNA-damaging effects. Individuals with preexisting liver and renal diseases should be careful to limit chromium intake.
	(UL) ND	(UL) ND	(UL) ND	(UL) ND	(UL) ND	

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Dietary Reference Intakes

Nutrient	Women 19-50 yrs	Pregnant	Breastfeeding	Infant	Child 1-6 years	Signs of Toxicity
Copper µg/d	(RDA) 900	(RDA) 1000	(RDA) 1300	(AI) 200 ≤6 mos 220 >6 mos	(RDA) 340 age 1-3 440 age 4-8	Long term toxicity is not well studied in humans, but it is rare in normal populations not having some hereditary defect in copper metabolism (Wilson's disease, Indian childhood cirrhosis, idiopathic copper toxicosis). Associated with liver damage and possible GI adverse effects.
	(UL) 10,000	(UL) 8000 ≤18yr 10,000 >18 yr	(UL) 8000 ≤18yr 10,000 >18 yr	(UL) ND	(UL) 1000 age 1-3 3000 age 4-8	
Fluoride mg/d	(AI) 3	(AI) 3	(AI) 3	(AI) 0.01 ≤6 mo 0.5 >6 mos	(AI) 0.7 age 1-3 1.0 age 4-8	Enamel fluorosis: mainly cosmetic, children ages 1-3 most at risk and not beyond age 8. Skeletal fluorosis in adults; extremely rare in US unless very high dose in drinking water (stiffness and pain in joints, osteosclerosis, possible osteoporosis of long bones, hypercalcification of vertebra).
	(UL) 10	(UL) 10	(UL) 10	(UL) 0.7 ≤6 mos 0.9 >6 mos	(AI) 1.3 age 1-3 2.2 age 4-8	
Iodine µg/d	(RDA) 150	(RDA) 220	(RDA) 290	(AI) 110 ≤6 mos 130 >6 mos	(RDA) 90	Goiter thyrotoxicosis
	(UL) 1100	(UL) 900 ≤18 yrs 1100>18 yrs	(UL) 900 ≤18 yrs 1100 >18 yrs	(UL) ND	(UL) 200 age 1-3 300 age 4-8	

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Dietary Reference Intakes

Nutrient	Women 19-50 yrs	Pregnant	Breastfeeding	Infant	Child 1-6 years	Signs of Toxicity
Iron mg/d	(RDA) 18	(RDA) 27	(RDA) 10 ≤18 yrs 9 >18 yrs	(AI) 0.27 ≤6 mos (RDA) 11 >6 months	(RDA) 7 age 1-3 10 age 4-8	No reports of iron toxicity from foods, however there are over 2000 cases of iron poisoning each year from supplements. Lethal dose of ferrous sulfate for 2 year old is approximately 3 g. For adults it ranges from 200-250 mg/kg body weight.
	(UL) 45	(UL) 45	(UL) 45	(UL) 40	(UL) 40	
Magnesium mg/d	(RDA) 400 ≤18 yr 320 >18 yr	(RDA) 350 age 19-30 360 age 31-50	(RDA) 360 ≤18 yr 310 age 19-30 320 age 31-50	(AI) 30 ≤6 mos 75 >6 mos	(RDA) 80 age 1-3 130 age 4-8	No evidence that large oral intakes are harmful to people with normal renal function, but impaired renal function resulting in magnesium retention, is often associated with hypermagnesemia
	(UL) 350	(UL) 350	(UL) 350	(UL) ND	(UL) 65 age 1-3 110 age 4-8	
	Note: the ULs for magnesium represent intake from a pharmacological agent only and do not include intake from food and water.					
Manganese mg/d	(AI) 1.8	(AI) 2.0	(AI) 2.6	(AI) 0.003 ≤6 mos 0.6 >6 mos	(RDA) 1.2 age 1-3 2.2 age 4-8	CNS pathology with neuromuscular deficits similar to Parkinson's disease. Well-recognized occupational hazard for people who inhale manganese dust.
	(UL) 11	(UL) 9 ≤ 18 yrs 11 > 18 yrs	(UL) 9 ≤ 18 yrs 11 > 18 yrs	(UL) ND	(UL) 2 age 1-3 3 age 4-8	

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Dietary Reference Intakes

Nutrient	Women 19-50 yrs	Pregnant	Breastfeeding	Infant	Child 1-6 years	Signs of Toxicity
Molybdenum µg/d	(RDA) 45	(RDA) 50	(AI) 50	(AI) 2 ≤6 mos 3 >6 mos	(RDA) 17 age 1-3 22 age 4-8	Limited toxicity data and appears to have low toxicity for humans (exception: people who are deficient in dietary copper or have dysfunction of copper metabolism.) In animals, associated with reduced growth, renal failure, skeletal abnormalities, infertility, anemia, diarrhea, thyroid injury, impaired copper utilization.
	(UL) 2000	(UL) 1700 ≤ 18 yrs 2000 > 18 yrs	(UL) 1700 ≤ 18 yrs 2000 > 18 yrs	(UL) ND	(UL) 300 age 1-3 600 age 4-8	
Phosphorus mg/d	(RDA) 700	(RDA) 1250 ≤18 yrs 700 >18 yrs	(RDA) 1250 ≤18 yrs 700 >18 yrs	(AI) 100 ≤6 mos 275 >6 mos	(RDA) 460 age 1-3 500 age 4-8	The phosphorus levels present in normal diets are not likely to be harmful if there is adequate calcium and vitamin D intake. Calcium-to-phosphorus ratio lower than 1 to 2 may lead to:hypocalcemia, hyperparathyroidism, resorption & loss of bone, hypocalcemic tetany in early infancy
	(UL) 4000	(UL) 3500	(UL) 4000	(UL) ND	(UL) 3000	
Selenium µg/d	(RDA) 55	(RDA) 60	(RDA) 70	(AI) 15 ≤6 mos (RDA) 20 >6 mos	(RDA) 20 age 1-3 30 age 4-8	Fingernail changes hair loss nausea abdominal pain diarrhea peripheral neuropathy fatigue irritability
	(UL) 400	(UL) 400	(UL) 400	(UL) 45 ≤6 mos 60 >6 mos	(UL) 90 age 1-3 150 age 4-8	
Zinc mg/d	(RDA) 8	(RDA) 13 ≤18 yrs 11 >18 yrs	(RDA) 14 ≤18 yrs 12 >18 yrs	(AI) 2 ≤6 mos (RDA) 3 >6 mos	(RDA) 3 age 1-3 5 age 4-8	GI irritation vomiting impairment of copper status microcytosis neutropenia impairment of immune responses decline in HDL levels
	(UL) 40	(UL) 34 ≤18 yrs 40 >18 yrs	(UL) 34 ≤18 yrs 40 >18 yrs	(UL) 4 ≤ 6 mos 5 >6 mos	(UL) 7 age 1-3 12 age 4-8	

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Alfalfa	Leaves; Other plant parts	Stimulate breastmilk production	Large quantities may cause cellular changes in the blood	No scientific or clinical evidence for efficacy; All others use with physician's advice
Aloe vera	Medicinal lotion; Oil; Leaves	Use for scrapes and burns; Stimulates peristalsis; Stimulant laxative	May decrease intestinal absorption; Kidney irritation; Skin rash; Severe allergies; Contains anthranoids which are a substance contraindicated in breastfeeding	Not encouraged for infant or child use; Do not use when pregnant; All others use with physician's advice
Baneberry	See Cohosh			
Basil	Therapeutic use, not spicing use	Delayed menstruation	Potential cancer causing	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Bladder-wrack	Plant parts	Thyroid deficiency	Thyroid upset as it contains iodine	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Black Cohosh (rhizome)	Capsules	PMS; Depression; Anti-diarrheal	Uterine contractions; Hypotension; Nausea/vomiting	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Borage	Fresh; syrup, jams, tea	Depression; Anticonvulsant	Constipating; Expectorant; Diuretic effects	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Buckthorn berry and bark (aka Purging Buckthorn)	Plant parts	Stimulant laxative	Contains anthranoids which are a substance contraindicated in breastfeeding	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Calamus (aka Sweet Flag)	Rhizome; Powdered	Digestive upsets; Colic	Depressed growth; Liver & heart abnormalities; Malignant tumors after long term use; (seen in animals)	Unsafe for everyone
Caraway	Seeds	Stimulate breastmilk production	None	No scientific or clinical evidence for efficacy; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Cellasene	Pill (mix of ginko beloba, seaweed, clover and "other ingredients")	Reduces cellulite; "Burns" fat	Potential thyroid problems as it contains five times the RDA for iodine	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Safety not known for all others - use with physician's advice
Chaparral	Tea from twig and leaf extract	Everything: Arthritis; Cancer; Venereal disease; Tuberculosis; Bowel cramps; Rheumatism; Colds; Analgesic; Expectorant; Emetic; Diuretic; Anti-inflammatory; Hair tonic	Toxic; Lesions in animals; Liver damage	Unsafe for everyone
Chaste tree	Plant parts	Stimulate breastmilk production	GI upset; itching; rash; headaches; increased menstrual flow	May be useful; Animal studies have shown an increase in lactation and mammary enlargement; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Cohosh (aka baneberry) separate entity from black cohosh or blue cohosh	Dried plant material; Tablets; Capsules; Teas; Tinctures	Everything	Dermatitis; Bloody diarrhea; renal failure	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Coltsfoot	Teas; Drops; Syrup	Coughs; Bronchial congestion	Hepatotoxic; Cancerous tumors in animal livers	Unsafe for everyone
Comfrey (one of the most common herbs sold to the American public)	Tea; Extract; Poultice	Everything: External use: treating cuts, wounds, burns, facilitates healing broken bones Internal use: respiratory/ lung/bronchial problems, stomach/ bowel/liver/ gallbladder ulcers, facilitates healing broken bones	Cancer in animals; Cumulative liver damage	Unsafe for everyone

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Cranberry	Capsules	Urinary Tract Infections	Diarrhea with overuse	Not encouraged for infant or child use; Can use small amounts in pregnancy and breastfeeding; Refrain from using capsules; All others use with physician's advice
Diet teas	Tea	Diet aid	Cramping; Diarrhea dehydration; Deaths in some with eating disorders	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Dill	Plant parts	Stimulate breastmilk production	None	No scientific or clinical evidence for efficacy; All others use with physician's advice
Dong quai	Plant parts	PMS; Menopausal symptoms	Not known	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Safety not known for all others - use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Echinacea (flowers, roots, leaves)	Capsules; Liquid	Colds; Boosts immune system	Interrupts development of child; Interferes with HIV/TB/MS therapy; Nausea or vomiting; Diarrhea	Not encouraged for infant or child use; Caution in breastfeeding; Don't take with cortiocosteroids, cyclosporine; All others use with physician's advice
Ephedra	Capsules; Tablets (ex. Ma Jung, Metabolife, Herbal PhenFen)	Weight loss; Increased metabolism	Hypertension; Hepatitis; Speeds up heart; Confusion; Depression	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Don't take with caffeine or other stimulants; Don't take with decongestants with stimulant ingredients; All others use with physician's advice
Fennel	Plant parts	Stimulate breastmilk production	Allergic reaction; Photo dermatitis; Contact dermatitis	No scientific or clinical evidence for efficacy; All others use with physician's advice
Fenugreek	Plant parts	Stimulate breastmilk production	None when ingested in normal quantities	No scientific or clinical evidence for efficacy; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Feverfew (aka Summer daisy)	Fresh leaves; Dried leaves; Tea	Prevention of headaches, migraines; Menstrual irregularity; Fever; Reduce inflammation; Treating arthritis	Mouth ulcers; Stomach irritation; Nausea; May interact with aspirin or any anti-inflammatory; Avoid if allergic to chamomile, ragweed, yarrow	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; May cause abortion; All others use with physician's advice
Garlic	Capsules	Reduce cholesterol, hypertension, and prevent cancer	Heartburn; Flatulence	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Germander	Dried plant material; Tablets; Capsules; Teas; Tinctures	Everything	Toxic; Acute hepatitis	Unsafe for everyone
Ginger (rhizome, stem)	Capsules	Morning sickness; Improve appetite	Occasional heartburn, not proven to prevent morning sickness	Not encouraged for infant or child use; Caution in pregnancy and breastfeeding; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Ginko Biloba (leaves)	Capsules; Tablets	Increased memory; Increased blood flow to head, ear and limbs	GI irritation; Headache; Allergic skin reaction	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Don't take with aspirin, anticoagulant drugs, vitamin E All others use with physician's advice
Ginseng (root)	Capsules; Liquid; Tablets	Reduce stress; Improve mental and physical performance; Reduce fatigue	Hypertension; Headache; Insomnia; Hypoglycemia; Contaminants	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Contaminants can be transferred to baby; Don't take with coumadin; All others use with physician's advice
Goldenseal	Plant parts	Tervelor's diarrhea; Topical antiseptic	Not known	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Green tea	Tea	Suspected anti-cancer effects; Cardiac disease prevention; Treat high blood pressure	Not known	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Kava-Kava (root and rhizome)	Capsules; Liquid	Traditionally used by Polynesians; Stress reducer	Depression; GI upset	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Don't take with alcohol, anti-Parkinson's medications, antipsychotics, sedatives, sleeping pills; All others use with physician's advice
Lettuce opium	Plant parts	Stimulate breastmilk production	Not known	No scientific or clinical evidence for efficacy; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Licorice (not the candy)	Tea; Syrup; Tobacco additive; Throat lozenges; Oil	Peptic ulcers; Cough remedy	Excessive use leads to headaches, lethargy, sodium and water retention, excessive excretion of potassium, high blood pressure, heart failure, cardiac arrest	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Don't take with blood pressure medications; All others use with physician's advice
Life root	Entire dried plant	Uterine disease; "Female problems"	Hepatotoxic; Potential for other liver disease and/or cancer	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Lobelia	"Tobacco" leaf form; Tea; Powder; Capsules; Tablets; Lozenges	Tuberculosis; Asthma; Chronic bronchitis; Emetic; Drug withdrawal; Nervous disorders; Expectorant; Euphorant	Respiratory depression; Sweating; Rapid heart beat; Low blood pressure; Coma followed by death	Unsafe for everyone

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Magnolia-stephania	Dried plant material; Tablets; Capsules; Teas; Tinctures	Everything	Toxic	Unsafe for everyone
Male Fern	Plant parts	Topical use	Poisoning	Unsafe for everyone
Mellilot	Tea	Everything	Harmful in large quantities	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Milk Thistle	Capsule	Combat hepatitis, liver disease; Laxative	Laxative effects	Not encouraged for infant or child use; Caution in pregnancy and breastfeeding; All others use with physician's advice
Mormon Tea (aka Teamster's tea, Squaw tea, Popotillo)	Tea	Venereal disease; Colds; Kidney disease; "Spring tonic"	Diuresis; Constipation	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Mother's Milk Tea	Blend of fennel seeds, coriander seeds, chamomile flowers, lemongrass, borage leaves, blessed thistle leaves, star anise, comfrey leaves, fenugreek seeds	Believed to increase mother's milk supply	Vomiting; Vertigo; Insomnia; Restlessness	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Pennyroyal Tea	Tea	Attempted abortion	Abortion in lethal or near lethal doses	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Podo-phyllum	Plant parts	Topical use	Systematically absorbed and toxic	Unsafe for everyone

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Poke root	Tea, in food or as beverage	Everything: Cathartic; Dyspepsia; Glandular swelling; Emetic; Narcotic; Cancer; Rheumatism; Conjunctivitis; Ringworm; Scabies; Ulcers	Extremely toxic; Blood cell abnormalities	Unsafe for everyone
Rhubarb root	Plant parts	Stimulant laxative	Not known	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Rosemary	Plant parts; Oil	Stimulate breastmilk production	Ingestion of large amounts of oil can result in GI distress; Kidney damage	No scientific or clinical evidence for efficacy; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Sage	Spicing Tea	Flavoring	Can reduce mother's breastmilk supply, if taken in large amount	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Sassafras	Formerly as an oil or food additive (banned by the FDA in 1960's)	Stimulant; Antispasmodic; Sweat producer; Rheumatism; Skin diseases; Syphilis; Typhus; Edema; Blood thinner; "Spring tonic"	Cancer	Unsafe for everyone
Sassafras root	Tea	Everything	Not known	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Saw Palmetto	Capsules; Tablets;	Enlarged prostate; Reduce testosterone levels	Affects estrogen; Increased urination; Muscle pain	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
St. John's Wort (flowering tops)	Capsules	Depression	Increased blood pressure; GI irritation; Fatigue; Restlessness	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Don't take with antidepressants; All others use with physician's advice
Summer Daisy	See Feverfew			
Sweet Flag	See Calamus			
Tonka Beans	Tea	Everything	Harmful in large quantities	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Uva uris	Plant parts	Urinary antiseptic; diuretic	May be toxic	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Valerian (root)	Capsules; Liquid	Sleep	Depression; Liver toxicity; Headache; Insomnia	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Don't take with alcohol, sedatives, sleeping pills; All others use with physician's advice
Watercress	Plant parts	Stimulate breastmilk production	GI upset	No scientific or clinical evidence for efficacy; All others use with physician's advice
Willow Bark	Dried plant material; Tablets; Capsules; Teas; Tinctures	Herbal substitute for aspirin; Aid in heart attack prevention	Toxic	Unsafe for everyone

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Herbs

Herb	Form	Used for	Side Effects	Recommendations
Woodruff	Tea	Everything	Harmful in large quantities	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Wormwood	Flavoring oil in vermouth; Fragrance in certain liniments	Intestinal worms; Flavoring agent; Fragrance; Causes the user to dream of his true love	A subtle poison; Mind-altering mental changes ; Physical changes	Unsafe for everyone
Yohimbe tree bark	Dried plant material; Tablets; Capsules; Teas; Tinctures	Boost potency; Build muscles	Nervous disorders; Paralysis; Fatigue; Stomach problems; Kidney failure; Seizures; Death	Unsafe for everyone

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Supplements

Supplement	Form	Used for	Side Effects	Recommendations
Alpha-lipoic acid (is an antioxidant)	Capsule; tablet	Preventive and/or for many age-related diseases like heart disease, strokes, cataracts, diabetes	Allergic skin reactions but basically still unknown; May affect dosage of diabetes medication	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Arginine (is an amino acid)	Tablets; Capsules	Build muscles; Lose fat	Wallet-draining side effect because a healthy diet provides plenty of arginine	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised; All others use with physician's advice
Bee pollen	Capsule	Cure-all; Improve athletic performance	Potential allergic reaction in those sensitive to bee stings or certain pollens	Not for those with gout, a tendency towards gout, or with renal disease; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Supplements

Supplement	Form	Used for	Side Effects	Recommendations
Boran (mineral nutrient)	Tablets	Optimize bone strength; Reduce calcium loss in post-menopausal women; prevent osteoporosis	Still being researched	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised
Brewer's yeast (aka nutritional yeast)	Powder; Capsule; Tablet	Decrease constipation; Treat diabetes; Lower cholesterol; Improve athletic performance	Diarrhea and nausea	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised
Carnitine (is an amino acid)	Tablets; Capsules	Provides more energy; Aerobic power; Body fat reduction	The form D-carnitine may actually weaken muscles because D-carnitine decreases the body's own supply of it; L-carnitine is thought to be safe	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Supplements

Supplement	Form	Used for	Side Effects	Recommendations
Chromium picolinate (chromium, a mineral, is bound to the molecule picolinate)	Tablet; Capsule	Diet aid; muscle-builder; Lowers blood sugar and cholesterol Slows the aging process	Still being researched (adverse effects are suspected)	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised
CoEnzymeQ 10 (is an essential component of human cells)	Tablet; Capsules	"A fountain of youth"; Heart disease prevention; Peridontal disease; Immune system dysfunction	GI upset Rashes Increased liver enzymes (rare) Potential drug interactions with Warfarin, Oral hypogylcemics, Adriamyacin	Use only with physician's advise; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised
Creatine monohydrate	Capsule	Enhance high-intensity exercise performance	Muscle cramps; Muscle strain; Nausea; Diarrhea; Dizziness; Electrolyte imbalances; Long term effects not known	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Supplements

Supplement	Form	Used for	Side Effects	Recommendations
Creatine phosphate (is an amino acid)	Tablets; Capsules	Enhance energy; Delay fatigue	Wallet-draining side effect because a healthy diet provides plenty of creatine phosphate	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised
DHEA (dehydroepian-drosterone is a steroid hormone)	Capsule; Tablet	Heart disease; AIDS/HIV; Alzheimer's disease; Autoimmune disease; Cardiovascular disease Cancer; Immune stimulation; Obesity	Acne and hirsutism in women at high doses; "feminization" of men; Insomnia Aggression; Irritability; Suspected interaction with hormonal therapies; Exacerbates Chronic Fatigue Syndrome	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Supplements

Supplement	Form	Used for	Side Effects	Recommendations
Fish-oil supplements	Capsules	Provides omega-3 fatty acids; Claims potential for lowering the risk of blocked blood vessels and heart attacks; Claims to prevent/aid arthritis, psoriasis, migraine, cancer and asthma	Overdosing can cause external and internal bleeding, anemia and strokes	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised
Garlic	Extracts; Pills; Powders	Prevent cancer; Boost immune system; Lower blood glucose and cholesterol; Thwart viruses like colds, flu, herpes; Boost strength; Fight fatigue	Toxic in high doses therefore if used, take on a full stomach; Some garlic preparations have been found contaminated with the very deadly clostridium botulinum	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Supplements

Supplement	Form	Used for	Side Effects	Recommendations
Glucosamine (is an amino acid) and Chondroitin (most often used together, but not recommended)	Tablet; Capsules	Osteoarthritis	Glucosamine--painful legs or edema; skin reactions; nausea/vomiting; headaches; potential glucose increase Chondroitin--dyspepsia; potential for bleeding reactions	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; **Those undergoing anticoagulation therapy or scheduled for surgery should not use;** Arthritis Foundation does not sanction use of either for treatment of osteoarthritis; All others use with physician's advice
Laetrile (substance derived from pits of apricots and other fruit with stones)	**Is not a vitamin;** Tablets; Capsules	Cure cancer	Can be poisonous due to cyanide content	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised
Lecithin (is a phospholipid)	Tablets; Capsules	Claims to dissolve cholesterol and unclog arteries	Overdoses can cause extreme stomach upset, profuse sweating and kills the appetite	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Supplements

Supplement	Form	Used for	Side Effects	Recommendations
Melatonin (is a hormone)	Tablet; Pills; Capsules	Aids sleep and jet lag; Prevent disease; Slow aging; Slow some cancers; Enhance sexual performance	Sleepiness; Impaired libido; Mild depression; At high doses: Nausea; headaches; nightmares; Decreased reproductive ability; Potential drug interaction with CNA depressants; Androgens/ estrogens; Methamphetamines; MAO inhibitors and others	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; Do not use if attempting to conceive or with immune system cancers; All others use with physician's advice
Ornithine (is an amino acid)	tablets; Capsules	Build muscle; Lose fat	Wallet-draining side effect because a healthy diet provides plenty of ornithine	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Supplements

Supplement	Form	Used for	Side Effects	Recommendations
Pangamic acid (aka "vitamin B15" **but is not a vitamin!)**	Capsule	Energy enhancer for athletes	Content is usually a mixture of unknown substances, therefore potentially hazardous	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
Royal jelly	Capsules	Menopausal symptoms; Sexual performance for men	Not known	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice
S-adenosyl-methionine (SAM-e)	Capsule	Treatment for depression, osteoarthritis, liver disease	GI discomfort, Possible increase in heart disease risk	Effects are not known for breastfeeding, pregnancy, infants or children, therefore not advised
Spirulina (aka "blue-green algae")	Dried plant parts	Energy supplement	Not known	Not encouraged for infant or child use; Do not use when pregnant or breastfeeding; All others use with physician's advice

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Definitions (continued)

Commonly Used Supplements

Supplement	Form	Used for	Side Effects	Recommendations
Tryptophan (is an amino acid)	Tablets; Capsules; Powders; Potions	Sleeping pill; Anti-depressant	Question of safety due to a 1989 contamination which caused major outbreak of rare eosinophilia-myalgia (a rare, sometimes fatal blood disease	Use only with physician's advice; Effects not known for breastfeeding, pregnancy, infants or children, therefore not advised

Suggested handouts

Daily Food Guide - Children/Pregnant/Breastfeeding/Postpartum
Infant Feeding Guide

Follow up and assessment guidelines

If pregnant, weight gain plotted and assessed at each clinic visit.
Appropriate nutrition education at each visit.

Justification

A participant taking inappropriate or excessive amounts of single or multivitamin or mineral or herbal remedy not prescribed by a physician, is at risk for a variety of adverse effects including harmful nutrient interactions, toxicity, and teratogenicity.

While many herbal teas may be safe, some have undesirable effects, particularly on infants who are fed herbal teas or who receive breast milk from mothers who have ingested herbal teas. Examples of teas with potentially harmful effects to infants include licorice, comfrey leaves, sassafras, senna, buckthorn bark, and chamomile.

Continued on next page

423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

Justification for high risk

Not applicable

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4. Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Food and Nutrition Board. Washington, DC: National Academy Press; 2001.

5. Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B_6, Folate, Vitamin B_{12}, Pantothenic Acid, Biotin, and Choline.* Food and Nutrition Board. Washington, DC: National Academy Press; 2001.

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

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22. Larsen Duyff, Roberta MS, RD CFCS. *Food and Nutrition Guide -- American Dietetic Association.* Minneapolis. Chronimed Publishing; 1996.

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423 Inappropriate or Excessive Intake of Vitamins, Minerals and Herbal Remedies, Continued

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424 Inadequate Vitamin/Mineral

Definition/ cut-off value

Participant not routinely taking a dietary supplement recognized as essential by national public health policy makers because diet alone cannot meet nutrient requirements.

- Pregnant Women not taking 30 mg of iron daily.

When the water supply contains < 0.3 ppm fluoride and:
- Infants = 6 months and Children < 3 years not taking 0.25 mg of fluoride daily
- Children 3-5 years not taking 0.50 mg fluoride daily.

When the water supply contains .3-.6 ppm fluoride and:
- Children 3-5 years not taking 0.25 mg fluoride daily.

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Infants	IV	N
Children	V	N

Documentation

Document or circle deficient on Medical History form.
Enter NRF #424 in screen 106.
Document referrals in screen 06.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Continued on next page

424 Inadequate Vitamin/Mineral, Continued

Counseling guidelines

Counsel women to take a daily iron supplement with a minimum of 30 mg of iron.
- could be included in their prenatal vitamin
- can be taken as a separate supplement
- refer to their health care provider for prescription, if necessary

Counsel and motivate caretakers of infant and children to have their child take the appropriate amount of fluoride daily.
- each clinic should have the information about the levels of fluoride in the water in their area
- refer the caretaker to their health care provider/dentist, if necessary

Suggested handouts

Daily Food Guide - Children/Pregnant
What To Eat When You Are Pregnant
Infant Feeding Guide

Follow up and assessment guidelines

If pregnant, weight gain plotted and assessed at each clinic visit.
Appropriate nutrition education at each visit.

Justification

CDC advocates universal iron supplementation for pregnant women because a large proportion of women have difficulty maintaining iron stores during pregnancy, and are at risk for anemia.

Fluoride decreases the susceptibility of the teeth to dental caries. Once fluoride is an integral part of the tooth structure, teeth become stronger and more resistant to decay.

Justification for high risk

Not applicable

Continued on next page

424 Inadequate Vitamin/Mineral, Continued

References

1. CDC Morbidity and Mortality Weekly Report: Recommendations to Prevent and Control Iron Deficiency in the United States; April 3, 1998; vol. 47; pp. 18-19, and 24.

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425 Inappropriate Feeding Practices for Children

Definition/ cut-off value

Routine consumption or feeding of:

- 12 or more ounces of any fruit juice per day;
- Non-fat or reduced-fat milks as primary milk source between 12 and 24 months of age;
- Foods low in essential nutrients and high in calories that replace age-appropriate nutrient dense foods needed for growth and development between 12 and 24 months of age
- Foods of inappropriate consistency, size, or shape that put children less than 4 years of age at risk of choking.

Routine use of any of the following inappropriate feeding practices:

- Forcing a child to eat a certain type and/or amount of food;
- Ignoring a child's requests for appropriate foods (e.g., when child is hungry);
- Restricting a child's ability to consume nutritious meals at an appropriate frequency per day;
- Not supporting a child's need for growing independence with self-feeding (e.g., spoon-feeding a child who is able and ready to finger-feed and/or try self-feeding with appropriate utensils);
- Feeding or offering a child primarily pureed or liquid food when the child is ready and capable of eating foods of an appropriate texture.

Participant category and priority level

Category	Priority	High Risk
Children	V	N

Documentation

Circle the inappropriate feeding practices on the Medical History form.
Circle the inappropriate feeding practices on the Food Frequency form.
Enter NRF #425 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Continued on next page

425 Inappropriate Feeding Practices for Children, Continued

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

Explain methods to achieve an adequate diet and age appropriate child feeding practices with emphasis on:

- use of whole milk for all children up to age two
- limiting the daily intake of fruit juice as to not interfere with the intake of other nutritious foods.
  - fruit juice intake should not exceed 11 ounces per day
- feeding foods of appropriate consistency, size or shape for children less than 4 years of age to reduce the risk of choking
- age appropriate foods and what food groups on serving sizes should be offered daily
- avoid foods low in essential nutrients and high in calories, especially for children < 2 years of age
- offer nutritious food every 2-3 hours during the day
- the importance of offering foods with which they can learn to self feed

Discuss Ellyn Satter's Division of Responsibility for feeding.

Suggested handouts

Daily Food Guide - Children
How Much Is Enough For My Child?
My Child Will Not Eat A Balanced Diet - Is This Normal?

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Continued on next page

425 Inappropriate Feeding Practices for Children, Continued

Justification

Routine consumption of 12 or more ounces of fruit juice per day by young children may displace other more nutritious foods. Excessive juice intake has been linked with failure to thrive and gastrointestinal disturbances. In addition, some young children who consume excessive amounts of sorbitol-containing fruit juices (e.g. prune, pear, sweet cherry, and apple juice) can develop chronic nonspecific diarrhea.

Non-fat and reduced-fat milks are not recommended for infants and children under two years because of their lower fat level, high protein content, and high electrolyte concentration. The low-calorie, low-fat content of these milks requires that increased volume be consumed to satisfy caloric needs. Infants and children under two using reduced fat milks gain at a slower growth rate, lose body fat as evidenced by skinfold thickness, lose energy reserves, and are at risk of inadequate intake of essential fatty acids.

Excessive intake of nutrient-poor and high calorie foods and beverages by children between 12 and 24 months of age can dampen appetite and reduce the consumption of nutritious foods, including iron-rich foods, in this age group (6,7). Such displacement of nutrients from more appropriate nutritious foods reduces the nutrients available for growth and development (8). WIC nutrition counseling can provide information to parents and children to improve the quality of their diets.

Children younger than 4 years are at greater risk for choking on food that, in some cases, can lead to death by asphyxiation (9). Foods that are hard, round, and do not dissolve in saliva, present a choking risk (10).

Continued on next page

425 Inappropriate Feeding Practices for Children, Continued

Justification (continued)

The interactions and communication between a caregiver and child during feeding and eating influence a child's ability to progress in eating skills and consume a nutritionally adequate diet. These interactions comprise the "feeding relationship" (11). A dysfunctional feeding relationship, which could be characterized by a caregiver misinterpreting, ignoring, or overruling a young child's innate capability to regulate food intake based on hunger, appetite and satiety, can result in poor dietary intake and impaired growth (12, 13). Parents who consistently attempt to control their children's food intake may give children few opportunities to learn to control their own food intake (14). This could result in inadequate or excessive food intake, future problems with food regulation, and problems with growth and nutritional status.

Justification for high risk

Not applicable

References

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425 Inappropriate Feeding Practices for Children, Continued

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426 Inadequate Folic Acid Intake to Prevent Neural Tube Defects (NTD's), Spina Bifida and Anencephaly

Definition/ cut-off value

Consumption of less than 400 mcg of folic acid (synthetic) from fortified foods and/or supplements daily.

Participant category and priority level

Category	Priority	High Risk
Breastfeeding	IV	N
Postpartum	VI	N

Documentation

Circle the inadequate folic acid intake on the Medical History form.
Circle the inadequate folic acid intake on the Food Frequency form.
Enter NRF #426 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Continued on next page

426 Inadequate Folic Acid Intake to Prevent Neural Tube Defects (NTD's), Spina Bifida and Anencephaly, Continued

Counseling guidelines

- Folic acid (folate) is one of the B vitamins that women need in their daily diet. It is used to build red blood cells and prevent certain types of anemias.
- Folic acid has also been shown to help prevent heart disease and colon cancer. Men, women and children should consume at least 400 micrograms each day.
- This vitamin is even more important in a woman who could become pregnant. Taken before pregnancy it can help prevent birth defects such as neural tube defects (i.e. Spina Bifida). Neural tube defects are abnormalities of the spine which happen in the first 30 days after a woman becomes pregnant.
- In Utah, neural tube defects happen more often in women up to 30 years of age, after their first healthy baby.
- Women should eat a very healthy diet, but diet alone will not prevent neural tube defects.
- All women of childbearing age who **could** become pregnant should take a multivitamin with folic acid **BEFORE** and **DURING** pregnancy.
- It is important for women to take a multivitamin with 400 micrograms folic acid every day throughout your childbearing years, even if pregnancy is not planned.
- If you have prenatal vitamins, take the prenatal vitamins until they are gone. Once they are done, start on a multivitamin with folic acid.
- Review food sources of folate and folic acid.

Suggested handouts

Folic Acid

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Continued on next page

426 Inadequate Folic Acid Intake to Prevent Neural Tube Defects (NTD's), Spina Bifida and Anencephaly, Continued

Justification

Women of childbearing age who do not consume adequate amounts of folic acid are at greater risk of having a pregnancy affected by the neural tube defects (NTDs), spina bifida and anencephaly. Two randomized studies (Czeizel and Duda, 1992 and MRC Vitamin Study Research group, 1991) showed that folic acid consumed from fortified foods and/or a vitamin supplement in addition to folate found naturally in food reduces this risk. Each year, approximately 2500 infants are born with spina bifida and anencephaly in the U.S. Studies show that taking 400 mcg of folic acid daily can prevent 50-70 percent of spina bifida and anencephaly births. In 1992, the Centers for Disease Control recommended that all women capable of becoming pregnant consume 400 mcg of folic acid daily to reduce the risk of having a NTD affected pregnancy. A larger dose, 4000 mcg, is recommended for women who have had a previous pregnancy affected by NTDs. These women are 20 times more likely to have a subsequent affected pregnancy. Because NTDs develop early in pregnancy 9between the 17th and 30th day) and many pregnancies are not planned, it is important to have adequate intakes before pregnancy and throughout the childbearing years. NTDs often occur before women know they are pregnant.

While the terms "folic acid" and "folate" are used interchangeably, they have different meanings. It is important to note that folic acid is the synthetic form used in vitamin supplements and fortified foods. Folate occurs naturally and is found in dark green leafy vegetables, strawberries, orange juice, etc. Synthetic folic acid is absorbed better than folate found naturally in food. In 1998, the U.S. government began a folic acid supplementation program to fortify all grain products with folic acid. As a result, the WIC Program provides a variety of cereals that have been fortified with synthetic folic acid. Some contain as much as 100% of the Recommended Daily Allowance. In addition to fortified cereals, nutrition counseling provided in the WIC Program can help improve women's knowledge about folic acid. It is important that breastfeeding and non-breastfeeding women participating in WIC know about folic acid. However, many women do not know the benefits of folic acid and are unable to identify good sources of this vitamin.

Continued on next page

426 Inadequate Folic Acid Intake to Prevent Neural Tube Defects (NTD's), Spina Bifida and Anencephaly, Continued

Justification, continued

In her study of 251 WIC eligible women, Kloblen conducted interviews to determine folate related knowledge and behaviors. Foods fortified with folic acid were included in the definition of folate. Study findings revealed the following:

- 80 percent did not take a supplement preconceptionally
- 26 percent could correctly define folate
- 30 percent could like food sources of folate

Although some studies report increased blood folate levels in the population as a result of regulations outlined the requirements for routine fortification of grain products, there is no evidence at this time indicating that fortification has eradicated the need for the 1992 public health recommendation.

Justification for high risk

Not applicable

426 Inadequate Folic Acid Intake to Prevent Neural Tube Defects (NTD's), Spina Bifida and Anencephaly, Continued

References

1. Morbidity and Mortality Weekly Report: Recommendations for the Use of Folic Acid to Reduce the Number of Cases of Spina Bifida and other Neural Tube Defects; September 11, 1992; Vol 41; No, RR-14.

2. Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, vitamin B6, Folate, vitamin B12, Pantothenic Acid, Biotin and Choline; 1999; Institute of medicine: National Academy Press; p. 131-198.

3. Kloeblen, Amy S: Folate knowledge, intake from fortified grain products, and periconceptional supplementation patterns of a sample of low-income pregnant women according to the Health Belief Model; JADA; January 1999; p. 33-38.

4. Centers for Disease Control and Prevention: Preventing Neural Tube Birth Defects: A Prevention Model and Resource Guide; 1998.

5. Suitor, C.W. and Bailey, L.B: Dietary Folate Equivalents: Interpretation and Application; JAmDietAssoc; 2000:100; p. 88-94.

6. Oakley, Godfrey, Adams, Myron and Dickinson, Charlotte: More Folic Acid for Everyone, Now; American Institute of Nutrition 1996; p.751S-755S.

501 Possibility of Regression

Definition/ cut-off value

A participant who has previously been certified eligible for the Program may be considered to be at nutritional risk in the next certification period if the CPA determines there is a possibility of regression in nutritional status without the benefits that the WIC Program provides. There is no limit in the number of times this NRF can be used.

When regression can be used:
- participant was at nutritional risk during the last certification period
- nutrition risk from last certification period has been resolved
- CPA ruled out the existence of all other risk factors
- participant will regress to previous nutrition risk without WIC benefits

When regression **cannot** be used:
- at the initial certification
- participant can be certified for other risk factors
- participant was certified using only the following risk factors during the last certification period
  - Women - 101, 111, 131, 132, 133, 301, 302, 334, 335, 381 (gingivitis of pregnancy), 601
  - Infants - 141, 142, 151, 153, 701, 702
  - All participants - 501, 502

Participant category and priority level

Category	Priority	High Risk
Breastfeeding	VII	N
Postpartum	VII	N
Infants	VII	N
Children	VII	N

Documentation

Enter NRF #501 in screen 106.
Document the risk factor(s) which the participant may regress to in the participant's chart.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Continued on next page

501 Possibility of Regression, Continued

Parameters for auto assign	Not auto assigned. Must be manually selected.
Counseling guidelines	Congratulate participant on their improved nutritional status. Give dietary recommendations appropriate to prevent reoccurrence of previous risk factor(s). Reinforce positive practices. Inform participant of possibility of not requalifying for WIC at the next certification.
Suggested handouts	Infant Feeding Guide The First 12 Months Daily Food Guide - Children/Postpartum/Breastfeeding
Follow up and assessment guidelines	Appropriate nutrition education at each visit.

Continued on next page

501 Possibility of Regression, Continued

Justification

On occasion, a participant's nutritional status may be improved, to the point that s/he rises slightly above the cutoff of the initial risk condition by the end of the certification period. This occurs most frequently with those conditions that contain specific cutoffs or thresholds, such as anemia or inappropriate growth. Removal of such individuals from the program can result in a "revolving-door" situation where the individual's recently improved nutritional status deteriorates quickly, so that s/he then re-enters the program at equal or greater nutrition risk status than before. Therefore, WIC Program regulations permit State agencies to certify previously certified individuals who do not demonstrate a current nutrition risk condition against the possibility of their reverting to the prior existing risk condition if they do not continue to receive WIC benefits. This policy is consistent with the preventive nature of the WIC Program, and enables State and local agencies to ensure that their previous efforts to improve a participant's nutrition status, as well as to provide referrals to other health care, social service, and/or public assistance programs are not wasted.

Justification for high risk

Not applicable

References

1. WIC Program Regulations: Section 246.7(e)(1)(iii)

502 Transfer of Certification

Definition/ cut-off value

Person with current valid Verification of Certification (VOC) document from another State or local agency. The VOC is valid until the certification period expires, and shall be accepted as proof of eligibility for program benefits. If the receiving local agency has waiting lists for participation, the transferring participant shall be placed on the list ahead of all other waiting applicants.

Participant category and priority level

Category	Priority	High Risk
Pregnant	I*	
Breastfeeding	I*	
Postpartum	IV*	
Infants	I*	
Children	III*	

*This priority is automatically assigned if priority is not known.

Continued on next page

502 Transfer of Certification, Continued

Documentation

Copy of VOC in participant's chart.
If out of state:
- complete screen 101 and 106
- select nutrition risk factor(s) if known
- select NRF 502a if priority is known
  - enter known priority
- select NRF 502b if priority is not known
  - highest priority will automatically be assigned
- enter cert and term date from VOC

If in-state and not vouchering today:
- complete screen 101 verifying spelling of name, date of birth, participant ID number, category (if woman), and clinic ID number

If in-state and vouchering today:
- complete screen 101 verifying spelling of name, date of birth, participant ID number, category (if woman), clinic ID number, base date, and cert and term dates
- complete screen 106:
- select NRF 502a if priority is known
  - enter known priority
- select NRF 502b if priority is not known
  - highest priority will automatically be assigned
- enter cert and term date from VOC

Document referrals in screen 106.
If high risk, a High Risk Care Plan should be attached to the VOC.
- schedule individual contact with Registered Dietitian in one month

If receiving special/non-contract formula, a copy of prescription and documentation of number of months approved should be attached.
If not high risk, schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

See specific risk factors.

Continued on next page

502 Transfer of Certification, Continued

Suggested handouts	Daily Food Guide - Children/Pregnant/Breastfeeding/Postpartum Infant Feeding Guide
Follow up and assessment guidelines	See specific risk factors.
Justification	Local agencies must accept Verification of Certification (VOC) documents from participants. A person with a valid VOC document shall not be denied participation in the receiving State because the person does not meet that State's particular eligibility criteria. Once a WIC participant has been certified by a local agency, the service delivery area into which s/he moves is obligated to honor that commitment.
Justification for high risk	See specific risk factors.
References	1. WIC Program Regulations: Section 246.7(k); FNS Instruction 803-11, Rev. 1.

601 Breastfeeding Mother of Infant at Nutritional Risk

Definition/ cut-off value

A breastfeeding woman whose breastfed infant has been determined to be at nutritional risk.

Participant category and priority level

Category	Priority	High Risk
Breastfeeding	I, II or IV*	N

*Note: Must be the same priority as at-risk infant.

Documentation

Enter NRF #601 in screen 106.
- choose NRF #601a if infant is certified as Priority I
- choose NRF #601b if infant is certified as Priority II
- choose NRF #601c if infant is certified as Priority IV

Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

Encourage and support continued breastfeeding.
Provide information on any breastfeeding concerns she may have.
Review breastfeeding information appropriate to infant's age, including:
- frequency of feedings
- stooling patterns
- growth spurts
- introduction of solids
- returning to work/school

Explain recommended calorie intake for optimal milk production:
- dietary intake should be well balanced and include all food groups in the Food Guide Pyramid
- a breastfeeding woman needs to consume at least 1,800 calories

Refer to Lactation Educator, if needed.

601 Breastfeeding Mother of Infant at Nutritional Risk, Continued

Suggested handouts

Breastfeeding Notes
I'm Breastfeeding - What Should I Eat?
Daily Food Guide - Breastfeeding

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Justification

A breastfed infant is dependent on the mother's milk as the primary source of nutrition. Special attention should therefore be given to the health and nutritional status of the mother (3). Lactation requires an additional 500 kcal per day (approximately) as increased protein, calcium, and other vitamins and minerals (4, 5). Inadequate maternal nutrition may result in decreased nutrient content of the milk (5).

Justification for high risk

Not applicable

References

1. WIC Program Regulations: Section 246.7(e)(1)(i)

2. Lawrence, RA: Breastfeeding: A Guide for the Medical Profession; 4th Edition; 1994.

3. Worthington-Roberts, BS and Williams, SR: Nutrition in Pregnancy and Lactation; 5th Edition; Times-Mirror/Mosby College Publishing; 1993; pp. 347-401.

4. Food and Nutrition Board: Recommended Dietary Allowances; 10th revision; National Academy of Sciences; National Research Council; 1989; pp. 34-35, 285 table.

5. Institute of Medicine: Nutrition During Lactation; National Academy Press; 1991; pp. 103, 140, 214.

602 Breastfeeding Complications or Potential Complications (Women)

Definition/ cut-off value

A breastfeeding woman with any of the following complications or potential complications for breastfeeding:

a. severe breast engorgement
b. recurrent plugged ducts
c. mastitis (fever or flu-like symptoms with localized breast tenderness)
d. flat or inverted nipples
e. cracked, bleeding or severely sore nipples
f. Age ≥ 40 years
g. Failure of milk to come in by 4 days postpartum
h. Tandem nursing (breastfeeding two siblings who are not twins)

Participant category and priority level

Category	Priority	High Risk
Breastfeeding	I	Y

Documentation

Circle breastfeeding complication or potential complication on Medical History form.
Enter NRF #602 in screen 106.
Document High Risk Care Plan in participant's chart.
Suggested components to assess:
- complication or potential complication identified
- infant's weight gain
- infant's feeding pattern and milk intake
- mother's medical condition
- mother's dietary intake
- family support
- referrals needed

RD must document management of care plan
Document referrals in screen 106.
Schedule follow-up with Lactation Educator immediately
- peer counselor may assist with follow-up

Schedule appropriate nutrition education or individual counseling at next visit.

Continued on next page

602 Breastfeeding Complications or Potential Complications (Women), Continued

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

Review infant's feeding pattern and milk intake:
- feed every 1 1/2 to 3 hours
  - nurse on both sides
  - may need to wake to nurse
- 6-8 wet diapers every day
- at least 4 bowel movements in 24 hours (before 2 months of age)

Review infant's weight gain.
Assess latch on:
- tummy to tummy
- as much of areola in mouth as possible

Explain recommended dietary intake:
- review Food Guide Pyramid
- eat small, healthy snacks between meals
- consume at least 1,800 calories

Severe breast engorgement:
- review hand expression procedures
- massage breast while nursing
- cold packs between feedings to reduce swelling
- warm shower or warm pack to promote milk ejection
- wear supportive bra
- loan electric breast pump for 24 hours or issue manual pump for relief

Recurrent plugged ducts:
- feed on affected side first
- massage breast in warm shower
- warm compress or gentle massage to area before feedings
- position baby's chin close to sore spot
- avoid tight fitting bras and clothing

Continued on next page

602 Breastfeeding Complications or Potential Complications (Women), Continued

Counseling guidelines, (continued)

Mastitis:
- nurse more frequently, at least every 2 hours
- feed on affected side first
- get plenty of bed rest
- increase fluid intake
- call MD for probable antibiotic prescription
- warm compresses before feedings
- avoid tight fitting bras

Flat or inverted nipples:
- use breast pump to pull out nipples prior to feedings
- wear breast shells between feedings
  - start with short time periods, working up to 8 hours
  - do not wear at night
- compress breast and areola between 2 fingers making it easier for infant to grasp

Cracked, bleeding or severely sore nipples:
- involve the Lactation Educator as soon as possible for assessment
- check positioning
- short, frequent feedings - every 1-2 hours
- begin nursing on the side which is least sore first
- break baby's suction before removing from the breast. Slip finger into corner of mouth, between gums
- rub a small amount of breastmilk or pure Lanolin on nipple after each feeding
- air-dry breasts after each feeding
- avoid using lotions, soaps, creams
- avoid using breast pads with plastic liners, rubber nipples or pacifiers

Continued on next page

602 Breastfeeding Complications or Potential Complications (Women), Continued

Counseling guidelines, (continued)

Age = 40 years:
- mom should be counseled on signs of adequate milk supply
  - 6-8 wet diapers
  - 4 or more bowel movements each day (before 2 months)
  - baby should be gaining weight
  - mother's milk should come in by 4 days postpartum

Failure of milk to come in by 4 days postpartum:
- supplement until milk comes in
  - continue to put baby to breast
  - feed formula with infant dropper or cup to avoid nipple confusion
- use breast pump to stimulate milk supply

Tandem nursing:
- vary nursing patterns - younger infant needs to receive both fore and hindmilk
- breastfeed younger infant every 1 1/2 to 3 hours
- give mother assurance that younger baby is receiving enough breastmilk
  - 6-8 wet diapers
  - 4 or more bowel movements each day (before 2 months)
- eat a balanced and nutritious diet including healthy snacks
- drink to thirst

Suggested handouts

The Early Weeks
Getting Started
I'm Breastfeeding - What Should I Eat?
Soreness
Nursing Your Sleepy Baby
How to Have a Good Breast Milk Supply

Continued on next page

602 Breastfeeding Complications or Potential Complications (Women), Continued

Follow up and assessment guidelines

Individual contact with WIC Lactation Educator immediately. If WIC Lactation Educator is not available, then leave a message for WIC Lactation Educator to call client within 48 hours. If needed, refer to doctor or hospital Lactation Educator. When the breastfeeding complications resolve, refer to the peer counselor.

- reassess weight status
- reassess dietary/caloric intake
- assess compliance with recommendations
- assess infant's weight gain.
- document if referrals were completed.

Justification

a) Severe engorgement is often caused by infrequent nursing and/or ineffective removal of milk. This severe breast congestion causes the nipple-areola area to become flattened and tense, making it difficult for the baby to latch-on correctly. The result can be sore, damaged nipples and poor milk transfer during feeding attempts. This ultimately results in diminished milk supply. When the infant is unable to latch-on or nurse effectively, alternative methods of milk expression are necessary, such as using an electric breast pump.

b) A clogged duct is a temporary back-up of milk that occurs when one or more of the lobes of the breast do not drain well. This usually results from incomplete emptying of milk. Counseling on feeding frequency or method or advising against wearing an overly tight bra or clothing can assist.

c) Mastitis is a breast infection that causes a flu-like illness accompanied by an inflamed, painful area of the breast - putting both the health of the mother and successful breastfeeding at risk. The woman should be referred to her health care provider for antibiotic therapy.

d) Infants may have difficulty latching-on correctly to nurse when nipples are flat or inverted. Appropriate interventions can improve nipple protractility and skilled help guiding a baby in proper breastfeeding technique can facilitate proper attachment.

Continued on next page

602 Breastfeeding Complications or Potential Complications (Women), Continued

Justification (continued)

e) Severe nipple pain, discomfort lasting throughout feedings, or pain persisting beyond one week postpartum is atypical and suggests the baby is not positioned correctly at the breast. Improper infant latch-on not only causes sore nipples, but impairs milk flow and leads to diminished milk supply and inadequate infant intake. There are several other causes of severe or persistent nipple pain, including Candida or staph infection. Referrals for lactation counseling and/or examination by the woman's health care provider are indicated.

f) Older women (over 40) are more likely to experience fertility problems and perinatal risk factors that could impact the initiation of breastfeeding. Because involutional breast changes can begin in the late 30's, older mothers may have fewer functioning milk glands resulting in greater difficulty producing an abundant milk supply.

g) Failure of milk to come in by 4 days postpartum may be a result of maternal illness or perinatal complications. This may place the infant at nutritional and/or medical risk, making temporary supplementation necessary until a normal breastmilk supply is established.

h) With tandem nursing the older baby may compete for nursing privileges, and care must be taken to assure that the younger baby has first access to the milk supply. The mother who chooses to tandem nurse will have increased nutritional requirements to assure her adequate milk production.

Justification for high risk

Breastfeeding provides optimal nutrition for infants during the first year of life. If complications arise in the breastfeeding process, the possibility that breastfeeding will continue diminishes greatly. The role of the Lactation Educator in the WIC program is to provide breastfeeding information to the WIC participant and triage any problems that arise with the breastfeeding dyad. WIC has the ability to ensure breastfeeding success.

Continued on next page

602 Breastfeeding Complications or Potential Complications (Women), Continued

References

1. Akre, J (Ed): Infant Feeding: the physiological basis; Who Bulletin OMS; Supplement; 1989; 67:19.

2. De Coppman J: Breastfeeding after pituitary resection: Support for a theory of autocrine control of milk supply? J Hum. Lact.; 1993; 9:35.

3. Mohrbacher, N., Stock, J.: The Breastfeeding Answer Book; Revised Edition; Schaumburg, IL: La Leche League Internal.; 1997.

4. Neifert, M.: Early assessment of the breastfeeding infant; Contemporary Pediatric.; 1996; 13:142.

5. Neifert, M.: The optimization of breastfeeding in the perinatal period; Clinics in Perinatology; June 1988 (In Press); 25.

6. Riordan, J., and Auerbach, K.: Breastfeeding and Human Lactation; 1993.

7. Lawrence, R.: Breastfeeding: A guide for the medical profession; 4th Edition; 1994.

8. Alexander, J., Grant, A. and Campbell, M.: Randomized controlled trial of breast shells and Hoffman's exercises for inverted and non protractile nipples; 1992; 304:1030.

9. The MAIN Trial Collaborative Group: Preparing for breastfeeding: treatment of inverted and non-protractile nipples in pregnancy; Midwifery; 1994; 10:200.

10. Amier, L, Garland, SM, Dennerstein, L, et al.: Candida albicans: Is it associated with nipple pain in lactating women? Gynecol Obstetr Invest; 1996; 41:30-34.

Continued on next page

602 Breastfeeding Complications or Potential Complications (Women), Continued

References

11. Lingstone, VH, Willis, CE, Berkowitz, J: Staphylococcus aureus and sore nipples; Can Family Physician; 1996; 42:654-659.

12. Woolridge, MW: Aetiology of sore nipples; Midwifery; 1986; 2:172.

13. Neifert, M., Seacat, J. and Jobe, W.: Lactation failure due to insufficient glandular development of the breasts; Pediatrics; 1985; 76:823.

14. Mohrbacher, N., Stock, J.: The Breastfeeding Answer Book, La Leche League International, Revised Edition, 1997.

15. Huggins, K.: The Nursing Mother's Companion, 3rd Edition, 1995.

16. Bumgarner, N. Mothering Your Nursing Toddler, 4th Edition, 1992.

603 Breastfeeding Complications or Potential Complications (Infants)

Definition/ cut-off value

A breastfed infant with any of the following complications or potential complications for breastfeeding:

a. jaundice
b. weak or ineffective suck
c. difficulty latching onto mother's breast
d. inadequate stooling (for age, as determined by a physician or other health care professional), and/or less than 6 wet diapers per day

Participant category and priority level

Category	Priority	High Risk
Infants	I	Y

Documentation

Circle breastfeeding complication or potential complication on Infant History form.
Enter NRF #603 in screen 106.
Document High Risk Care Plan in participant's chart.
Suggested components to assess:
- complication or potential complication identified
- infant's weight gain
- infant's feeding pattern and milk intake
- current breastfeeding support
- referrals needed

RD must document management of care plan
Document referrals in screen 106.
Schedule follow-up with Lactation Educator immediately.
- peer counselor may assist with follow-up

Schedule appropriate nutrition education or individual counseling at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Continued on next page

603 Breastfeeding Complications or Potential Complications (Infants), Continued

Counseling guidelines

Review infant's feeding pattern and milk intake:
- feed every 1 1/2 to 3 hours
  - nurse on both sides
  - may need to wake to nurse
- 6-8 wet diapers every day
- at least 4 bowel movements in 24 hours (before 2 months of age)

Review infant's weight gain.

Assess latch on:
- tummy to tummy
- as much of areola in mouth as possible

Breastmilk jaundice:
- discontinue breastfeeding for 24-36 hours
- review pumping guidelines - may need to loan electric pump for 48 hours

Breastfeeding jaundice:
- avoid water supplements
- supplement with extra calories (formula) if necessary

Weak or ineffective suck:
- feed baby when awake and alert
- listen for suck-swallow pattern
  - swallow after every two or three sucks
  - suck-swallow pattern should last 5-10 minutes per breast

Difficulty latching onto mother's breast
- review counseling for flat or inverted nipples or breast engorgement if appropriate
- mother needs to support breast using C-hold

Continued on next page

603 Breastfeeding Complications or Potential Complications (Infants), Continued

Suggested handouts

The Early Weeks
Getting Started
Soreness
Nursing Your Sleepy Baby
How to Have a Good Breast Milk Supply
Breastfeeding and Formula Supplementation flyer
Infant Feeding Guide

Follow up and assessment guidelines

Individual contact with WIC Lactation Educator immediately. If WIC Lactation Educator is not available, then leave a message for WIC Lactation Educator to call client within 48 hours. If needed, refer to doctor or hospital Lactation Educator. When the breastfeeding complications resolve, refer to the peer counselor.

- reassess growth: weight, height, weight for height, OFC
- reassess dietary/caloric intake
- assess compliance with recommendations
- encourage compliance with medical treatment, if needed
- document if participant followed through on referrals

Continued on next page

603 Breastfeeding Complications or Potential Complications (Infants), Continued

Justification

a. Jaundice occurs when bilirubin accumulates in the blood because red blood cells break down too quickly, the liver does not process bilirubin as efficiently as it should, or intestinal excretion of bilirubin is impaired. The slight degree of jaundice observed in many healthy newborns is considered physiologic. Jaundice is considered pathologic if it appears before 24 hours, lasts longer than a week or two, reaches an abnormally high level, or results from a medical problem such as rapid destruction of red blood cells, excessive bruising, liver disease, or other illness. When jaundice occurs in an otherwise healthy breastfed infant, it is important to distinguish "breastmilk jaundice" from "breastfeeding jaundice" and determine the appropriate treatment.

- In the condition known as "breastmilk jaundice," the onset of jaundice usually begins well after the infant has left the hospital, 5 to 10 days after birth, and can persist for weeks and even months. Early visits to the WIC clinic can help identify and refer these infants to their primary health care provider. Breastmilk jaundice is a normal physiologic phenomenon in the thriving breastfed baby and is due to a human milk factor that increases intestinal absorption of bilirubin. The stooling and voiding pattern is normal. If the bilirubin level approaches 18-20 mg%, the health care provider may choose to briefly interrupt breastfeeding for 24-36 hours which results in a dramatic decline in bilirubin level.

  Resumption of breastfeeding usually results in cessation of the rapid fall in serum bilirubin concentration, and in many cases a small increase may be observed, followed by the usual gradual decline to normal.

Continued on next page

603 Breastfeeding Complications or Potential Complications (Infants), Continued

Justification (continued)

- "Breastfeeding jaundice", is an exaggeration of physiologic jaundice, which usually peaks between 3 and 5 days of life, though it can persist longer. This type of jaundice is a common marker for inadequate breastfeeding. An infant with breastfeeding jaundice is underfed and displays the following symptoms: infrequent or ineffective breastfeeding; failure to gain appropriate weight; infrequent stooling with delayed appearance of yellow stools (i.e., prolonged passage of meconium); and scant dark urine with urate crystals. Improved nutrition usually results in a rapid decline in serum bilirubin concentration.

b. A weak or ineffective suck may cause a baby to obtain inadequate milk with breastfeeding and result in a diminished milk supply and an underweight baby. Weak or ineffective suckling can be due to prematurity, low birth weight, a sleepy baby, or physical/medical problems such as heart disease, respiratory illness, or infection. Newborns who receive bottle feedings before beginning breastfeeding or who frequently use a pacifier may have trouble learning the proper tongue and jaw motions required for effective breastfeeding.

c. Difficulty latching onto the mother's breast may be due to flat or inverted nipples, breast engorgement, or incorrect positioning and breastfeeding technique. Early exposure to bottle feedings can predispose infants to "nipple confusion" or difficulty learning to attach to the breast correctly and effectively extract milk. A referral for lactation counseling should be made.

Continued on next page

603 Breastfeeding Complications or Potential Complications (Infants), Continued

Justification (continued)

d. Inadequate stooling or less than 6 wet diapers are probable indicators that the breastfed infant is not receiving adequate milk. Not only is the baby at risk for failure to thrive, but the mother's milk is at risk for rapidly diminishing due to ineffective removal of milk. The breastfed infant with inadequate caloric intake must be identified early and the situation remedied promptly to avoid long-term consequences of dehydration or nutritional deprivation. Although failure to thrive can have many etiologies, the most common cause in the breastfed infant is insufficient milk intake as a result of infrequent or ineffective nursing. Inadequate breastfeeding can be due to infant difficulties with latching on or sustaining suckling, use of a nipple shield over the mother's nipple, impaired let down of milk, a non-demanding infant, excessive use of a pacifier, or numerous other breastfeeding problems.

   The literature regarding inadequate stooling varies widely in terms of quantification; this condition is best diagnosed by the pediatrician or other health care practitioner.

Justification for high risk

Breastfeeding provides optimal nutrition for infants during the first year of life. If complications arise in the breastfeeding process, the possibility that breastfeeding will continue diminishes greatly. The role of the Lactation Educator in the WIC program is to provide breastfeeding information to the WIC participant and triage any problems that arise with the breastfeeding dyad. WIC has the ability to ensure breastfeeding success.

Continued on next page

603 Breastfeeding Complications or Potential Complications (Infants), Continued

References

1. Auerbach KG, and Gartner LM: Breastfeeding and human milk: their association with jaundice in the neonate; Clinics in Perintology; 1987; 14:89.

2. Maisels MJ, and Newman TB: Kernicterus in otherwise healthy, breastfed term newborns; Pediatr.; 1995; 96:730.

3. Neifert M: Early assessment of the breastfeeding infant; Contemporary Pediatr.; 1996; 13:142.

4. Neifert M: The optimization of breastfeeding in the perinatal period: Clinics in Perintology; June 1998 (In Press); 25.

5. Seidman DS, Stevenson, DK, Ergas, Z, and Gale R: Hospital readmission due to neonatal hyperbilirubinemia; Pediatr.; 1995; 96:727.

6. Tudehope D, Bayley G, Munro D, et al.: Breastfeeding practices and severe hyperbilirubunemia: J Pediatr. Child Health; 1991; 27:240.

7. Barros FC, Victoria CG, Semer TC, et al..: Use of pacifiers is associated with decreased breastfeeding duration: Pediatrics; 1995; 95-497.

8. Kurinij, N and Shiono PH: Early formula supplementation of breastfeeding: Pediatr.; 1991; 88:745.

9. Victoria CG, Behague DP, Barros FC, Olinto MTA, and Weiderpass E: Pacifier use and short breastfeeding duration: cause, consequence, or coincidence? Pediatr.; 1997; 99:445.

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603 Breastfeeding Complications or Potential Complications (Infants), Continued

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13. Cooper WO, Atherton HD, Kahana M, et al.: Increased incidence of severe breastfeeding malnutrition and hypernatremia in a metropolitan area; Pediatr.; 1995; 96:957.

14. DeCarvalho M, Robertson S, Friedman A, and Klaus M: Effect of frequent breastfeeding on early milk production and infant weight gain; Pediatr.; 1983; 72:307.

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16. Thullen JD: Management of hypernatremic dehydration due to insufficient lactation; Clin Pediatr; 1988; 27:370.

17. Weaver LT, Ewing G, and Taylor LC: The bowel habits of milk-fed infants; J Pediatr Gastroenterol Nutr; 1988; 7:568.

18. Lawrence RA: Breastfeeding: A Guide for the Medical Profession; 4th Edition; 1994; pp. 371-372, 452-454.

19. Mohrbacher, N., Stock, J.: The Breastfeeding Answer Book, La Leche League International, Revised Edition, 1997.

20. Huggins, K.: The Nursing Mother's Companion, 3rd Edition, 1995.

701 Mom on WIC/Mom Not on WIC During Pregnancy

Definition/ cut-off value

An infant < six months of age whose mother was a WIC Program participant during pregnancy or whose mother's medical records document that the woman was at nutritional risk during pregnancy because of detrimental or abnormal nutritional conditions detectable by biochemical or anthropometric measurements or other documented nutritionally related medical conditions.
If mother was not on during pregnancy but would have qualified, the CPA must document what the mother would have qualified for.

Participant category and priority level

Category	Priority	High Risk
Infants	II	N

Documentation

If not on during pregnancy, document on the Nutrition Education Contact Sheet the reason mom would have qualified for WIC during pregnancy.
Enter NRF #701 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

Review basic infant nutrition:
- frequency of breastfeeding
- appropriate amount of formula
- introduction of solid foods

Suggested handouts

Infant Feeding Guide
The First 12 Months
Feeding Your Baby Solid Foods
How to Avoid Infant Allergies

Continued on next page

701 Mom on WIC/Mom Not on WIC During Pregnancy,
Continued

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Justification

Federal Regulations designate these conditions for WIC eligibility (1).

WIC participation during pregnancy is associated with improved pregnancy outcomes. An infant whose nutritional status has been adequately maintained through WIC services during gestation and early infancy may decline in nutritional status if without these services and return to a state of elevated risk for nutrition related health problems. Infants whose mother was at medical/nutritional risk during pregnancy, but did not receive those services, may also be thought of as a group at elevated risk for morbidity and mortality in the infant period (2, 3).

WIC participation in infancy is associated with lower infant mortality, decreased anemia for infants and improvements in growth (head circumference, height and weight). Infants on WIC are more likely to consume iron-fortified formula and cereal and less likely to consume cow's milk before one year, thus lowering the risk of developing iron deficiency anemia (2, 3).

Justification for high risk

Not applicable

References

1. WIC Program Regulations: Section 246.7(e)(1)(ii).

2. Journal of the American Dietetic Association: Nutrition Services: A Literature Review; April 1989; Supplement vol. 89(4): s-13, s-19.

3. Ryan, A.S., Martinez, G.A. and Malec, D.J.: The Effect of the WIC Program on Nutrient Intakes of Infants; Medical Anthropology; 1984; vol. 9, no. 2.

702 Breastfeeding Infant of Woman at Nutritional Risk

Definition/ cut-off value

Breastfeeding infant of woman at nutritional risk.

Participant category and priority level

Category	Priority	High Risk
Infants	I, II, or IV*	N

*Note: Must be the same priority as at-risk mother.

Documentation

Enter NRF #702 in screen 106.
- choose NRF #702a if mom is certified as Priority I
- choose NRF #702b if mom is certified as Priority II
- choose NRF #702c if mom is certified as Priority IV

Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

Encourage and support continued breastfeeding.
Address any breastfeeding concerns she may have.
Review breastfeeding information appropriate to infant's age, including:
- frequency of feedings
- stooling patterns
- growth spurts
- introduction of solids
- returning to work/school

Review basic infant nutrition:
- frequency of breastfeeding
- appropriate amount of formula
- introduction of solid foods

Refer to Lactation Educator, if needed.

702 Breastfeeding Infant of Woman at Nutritional Risk, Continued

Suggested handouts

The First 12 Months
Infant Feeding Guide
Breastfeeding Notes

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Justification

A breastfed infant is dependent on the mother's milk as the primary source of nutrition. Lactation requires the mother to consume an additional 500 kcal per day (approximately) as well as increased protein, calcium, and other vitamins and minerals (4, 5). Inadequate maternal nutrition may result in decreased nutrient content of the milk (5). Special attention should therefore be given to the health and nutritional status of breastfed infants whose mothers are at nutritional risk (3).

Justification for high risk

Not applicable

References

1. WIC Program Regulations: Section 246.7(e)(1)(i)

2. WIC Program Regulations: Section 246.7(d)(1)(ii)

3. Worthington-Roberts, BS and Williams, SR: Nutrition in Pregnancy and Lactation; 4th Edition; Times-Mirror/Mosby College Publishing; 1989; pp. 364-365.

4. Food and Nutrition Board: Recommended Dietary Allowances; 10th revision; National Academy of Sciences; National Research Council; 1989; 34-35.

5. Institute of Medicine: Nutrition During Lactation; National Academy Press; 1991; pp. 103, 140, 214.

703 Infant Born of Woman with Mental Retardation or Alcohol or Drug Abuse During Most Recent Pregnancy

Definition/ cut-off value

Infant born of a woman:

- diagnosed with mental retardation by a physician or psychologist as self-reported by applicant/participant/caregiver; or as reported or documented by a physician, psychologist, or someone working under physician's orders; or
- documentation or self-report of any use of alcohol or illegal drugs during most recent pregnancy

Participant category and priority level

Category	Priority	High Risk
Infants	I	N

Documentation

Document physician's diagnosis in participant's chart or circle condition on Infant History form if self reported.
Enter NRF #703 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

Review basic infant nutrition.
If bottle feeding:
- discuss bottle sanitation and preparation
- review formula mixing instructions
  - issue concentrate or ready-to-feed, if appropriate

Review appropriate growth pattern for infant.
Refer to a substance abuse program if abusing alcohol or drugs.
Assess need for additional services and make referrals if needed.

Continued on next page

703 Infant Born of Woman with Mental Retardation or Alcohol or Drug Abuse During Most Recent Pregnancy, Continued

Suggested handouts

The First 12 Months
Infant Feeding Guide

Follow up and assessment guidelines

Appropriate nutrition education at each visit.

Justification

Cognitive limitation in a parent or primary caretaker has been recognized as a risk factor for failure to thrive (FTT) as well as for abuse and neglect. The retarded caretaker may not exhibit the necessary parenting skills to promote beneficial feeding interactions with the infant (2, 4). Maternal mental illnesses such as severe depression and maternal chemical dependency, also represent social risk factors for FTT. Chemical dependency is also strongly associated with abuse and neglect. In 22 States, 90% of caretakers reported for child abuse are active substance abusers (5). All of these maternal conditions may contribute to a lack of synchrony between the infant and mother during feeding and therefore interfere with the infant's growth process. Nutrient intake depends on the synchronization of maternal and infant behaviors involved in feeding interactions (3, 4).

Justification for high risk

Not applicable

Continued on next page

703 Infant Born of Woman with Mental Retardation or Alcohol or Drug Abuse During Most Recent Pregnancy, Continued

References

1. WIC Program Regulations: Section 246.7(e)(2)(ii)

2. Accardo, Pasquale and Whitman, Barbara: Children of Mentally Retarded Parents; American Journal of Disease of Children; 1990; 144:69-70.

3. Pollitt, Ernest and Wirtz, Steve: Mother-infant feeding interaction and weight gain in the first month of life; Journal of American Dietetic Association; 1981l 78:596-601.

4. Grand, R, Stephen, J, and Dietz, W.: Pediatric Nutrition: Theory and Practice; Butterworths; 1987; pp. 627-644.

5. McCullough, C: The Child Welfare Response; The Future of Children; Spring 1991; vol. 1(1); pp. 61-71.

801 Homelessness

Definition/ cut-off value

A woman, infant or child who lacks a fixed and regular nighttime residence; or whose primary nighttime residence is:

- a supervised publicly or privately operated shelter designed to provide temporary living accommodations. This includes group shelters, rescue missions, shelters for victims of domestic violence, motels, etc.
- a public or private place not ordinarily used as a regular sleeping accommodation for human beings. Examples include tents, cars, parks, hallways, sidewalks, abandoned buildings, doorsteps, etc.
- a temporary residence for persons intended to be institutionalized

A homeless person may no longer be considered homeless while living in a temporary accommodation of another individual if it has been more than 365 days.

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Breastfeeding	IV	N
Postpartum	VI	N
Infants	IV	N
Children	V	N

Documentation

Enter "homeless" in residential status field in screen 102.
NRF #801 auto assigned by UWIN.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Will be auto assigned if "homeless" is marked in residential status field.

Continued on next page

801 Homelessness, Continued

Counseling guidelines

Review Food Guide Pyramid.
Review food preparation and safety techniques appropriate for current living conditions.

- buy powdered or evaporated milk
- buy canned meats like tuna, chicken, turkey or ham
- buy canned soups with meat and beans for extra protein
- buy small amounts or fresh fruits and vegetables
- buy fruit juice in bottles or cans

Assign food package which accommodates participant's current access to housing and refrigeration.

- adjust food package monthly if needed

Suggested handouts

Food Safety Tips
Daily Food Guide - Children/Pregnant/Breastfeeding/Postpartum
Infant Feeding Guide
The First 12 Months

Follow up and assessment guidelines

If pregnant, weight gain plotted and assessed at each clinic visit.
Appropriate nutrition education at each visit.

Justification

Homeless individuals comprise a very vulnerable population with many special needs. WIC Program regulations specify homelessness as a predisposing nutrition risk condition. Today's homeless population contains a sizable number of women and children – over one-third of the total homeless population in the U.S. Studies show forty-three percent of today's homeless are families, and an increasing number of the "new homeless" include economically-displaced individuals who have lost their jobs, exhausted their resources, and recently entered into the ranks of the homeless and consider their condition to be temporary.

Continued on next page

801 Homelessness, Continued

Justification for high risk	Not applicable
References	1. WIC Program Regulations; Section 246.7(e)(2)(iv).

802 Migrancy

Definition/ cut-off value

Categorically eligible women, infants and children who are members of a family which contain at least one individual whose principal employment is in agriculture on a seasonal basis, who has been so employed within the last 24 months, and who establishes a temporary residence for the purpose of such employment.

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Breastfeeding	IV	N
Postpartum	VI	N
Infants	IV	N
Children	V	N

Documentation

Enter "migrant" in residential status field in screen 102.
NRF #802 auto assigned by UWIN.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Will be auto assigned if "migrant" is marked in residential status field.

Counseling guidelines

Review Food Guide Pyramid.
Review food preparation and safety techniques appropriate for current living conditions.

- buy powdered or evaporated milk
- buy canned meats like tuna, chicken, turkey or ham
- buy canned soups with meat and beans for extra protein
- buy small amounts or fresh fruits and vegetables
- buy fruit juice in bottles or cans

Assign food package which accommodates participant's current access to housing and refrigeration, if applicable.

Continued on next page

802 Migrancy, Continued

Suggested handouts	Food Safety Tips Infant Feeding Guide Daily Food Guide - Children/Pregnant/Breastfeeding/Postpartum
Follow up and assessment guidelines	If pregnant, weight gain plotted and assessed at each clinic visit. Appropriate nutrition education at each visit.
Justification	Data on the health and/or nutritional status of migrants indicate significantly higher rates or incidence of infant mortality, malnutrition, and parasitic disease (among migrant children) than among the general U.S. population. Therefore, migrancy has long been stipulated as a condition that predisposes persons to inadequate nutritional patterns or nutritionally related medical conditions.
Justification for high risk	Not applicable
References	1. WIC Program Regulations: Section 246.7(e)(2)(iv).

901 Environmental Risk

Definition/ cut-off value

Battering or child abuse/neglect within past 6 months as self-reported, or as documented by a social worker, health care provider or on other appropriate documents, or as reported through consultation with a social worker, health care provider, or other appropriate personnel.

"Battering" generally refers to violent physical assaults on women.

Child abuse/neglect: "Any recent act or failure to act resulting in imminent risk of serious harm, death, serious physical or emotional harm, sexual abuse, or exploitation of an infant or child by a parent or caretaker (2)."

State law requires the reporting of known or suspected child abuse or neglect. WIC staff must report such information to Child Protective Services. WIC regulations pertaining to confidentiality do not take precedence over such State law.

Law does not required WIC to report suspected battering; however, extensive referrals must be given.

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Breastfeeding	IV	N
Postpartum	VI	N
Infants	IV	N
Children	V	N

Continued on next page

901 Environmental Risk, Continued

Documentation

Enter NRF #901 in screen 106.
Document referrals in screen 106:
- local law enforcement
- battered women's shelter
- lawyers
- victim advocate programs
- Statewide Domestic Violence Info-line (1-800-897-LINK)

Report all child abuse to Child Protective Services.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Counseling guidelines

Child Abuse
Neglect and physical, emotional and sexual abuse have long term physical and emotional consequences for children.
Child abuse is a crime. Report all child abuse to Child Protective Services.
Counsel parent on impact of domestic violence on children:
- may be injured during an incident of parental violence
- may be traumatized by fear for their mother, their own helplessness in protecting her, or blame themselves for not preventing /causing it
- may be abused or neglected themselves
- may become violent themselves or have other serious emotional and behavioral problems

Give mom tips on coping with a crying baby:
- meet the baby's basic needs: feed, change, make comfortable, etc.
- take the baby for a ride in a stroller or in the car
- swaddle the baby snugly in a soft warm blanket
- if you are frustrated and need a break, put the baby in a playpen or crib, go to another part of the house and do something to calm down for a moment
- call a friend or relative you trust to take over for a while, then get away, get some rest and take care of yourself.

If the child is living in the same home as the perpetrator, see tips under Domestic Violence for leaving the home.

Continued on next page

901 Environmental Risk, Continued

Counseling guidelines, (continued)

Domestic Violence

Let the woman know that WIC is a place she can trust to come for help.

There are five tasks in helping victims of domestic violence:

- ask questions
- assess the woman's safety
- report to law enforcement
- refer her to those who can provide more help
- chart the violence and referrals

Avoid using the words "domestic violence," "abused," or "battered" when speaking with the victim.

Share these steps for a quick exit with women experiencing domestic violence:

- always keep some money hidden
- pack a suitcase or bag to store with a friend or neighbor. Include a change of clothing for you and your children, toilet articles, and a extra set of keys to the house and/or the car
- keep special item in an easy to locate but safe place, so that you can take them with you on short notice. These items include medicine, ID, social security cards and birth certificates, marriage license, insurance policies, extra cash, checkbook, savings account book, valuable jewelry, credit cards, WIC ID packet, and immunization records.
- know exactly where you will go and how to get a family member or friend who will help you. Call your doctor or go to the emergency room if you think you are hurt.
- call law enforcement (911). Physical abuse is a crime. The only way that you can protect your safety and guarantee that your violent partner will get help is to involve the legal system.

Continued on next page

901 Environmental Risk, Continued

Suggested handouts

Infant Feeding Guide
The First 12 Months
Daily Food Guide - Children/Pregnant/Breastfeeding/Postpartum
How Much is Enough For My Child?

Follow up and assessment guidelines

If pregnant, weight gain plotted and assessed at each clinic visit.
Appropriate nutrition education at each visit.

Justification

Battering during pregnancy is associated with increased risks of low birth weight, pre-term delivery, and chorioamnionitis, as well as poor nutrition and health behaviors. Battered women are more likely to have a low maternal weight gain, be anemic, consume an unhealthy diet, and abuse drugs, alcohol, and cigarettes.

Serious neglect and physical, emotional, or sexual abuse have short- and long-term physical, emotional, and functional consequences for children. Nutritional neglect is the most common cause of poor growth in infancy and may account for as much as half of all cases of nonorganic failure to thrive.

Justification for high risk

Not applicable

References

1. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; pp. 317-321.

2. The Child Abuse Prevention and Treatment Act Reauthorized; October 1996; Public Law 104-25.

902 Woman or Infant/Child of Primary Caregiver with Limited Ability to Make Feeding Decisions

Definition/ cut-off value

Woman (pregnant, breastfeeding, or postpartum) or infant/child whose primary caregiver is assessed to have a limited ability to make appropriate feeding decisions and/or prepare food. Includes individuals who are:

- ≤ 17 years of age;
- mentally disabled/delayed and/or have a mental illness such as clinical depression (diagnosed by a physician or licensed psychologist);
- physically disabled to a degree which restricts or limits food preparation abilities; or
- currently using or having a history of abusing alcohol or other drugs.

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Breastfeeding	IV	N
Postpartum	VI	N
Infants	IV	N
Children	V	N

Documentation

Enter NRF #902 in screen 106.
Document referrals in screen 106.
Schedule appropriate nutrition education at next visit.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Continued on next page

902 Woman or Infant/Child of Primary Caregiver with Limited Ability to Make Feeding Decisions, Continued

Counseling guidelines

Assess need for assistance in shopping, cooking and preparing meals.
Refer to EFNEP and other service programs, if needed.
Review basic infant/child nutrition.
If bottle feeding:
- discuss bottle sanitation and preparation
- review formula mixing instructions
  - issue concentrate or ready-to-feed, if appropriate

Explore meal planning and preparation ideas.
Give tips on grocery shopping.

Suggested handouts

The First 12 Months
Daily Food Guide - Children/Pregnant/Breastfeeding/Postpartum

Follow up and assessment guidelines

If pregnant, weight gain plotted and assessed at each clinic visit.
Appropriate nutrition education at each visit.

Justification

The mother or caregiver ≤ 17 years of age generally has limited exposure and application of skills necessary to care for and feed a total dependent. Cognitive limitation in a parent or primary caregiver has been recognized as a risk factor for failure to thrive, as well as for abuse and neglect. The mentally handicapped caregiver may not exhibit the necessary parenting skills to promote beneficial feeding interactions with the infant. Maternal mental illnesses such as severe depression and maternal chemical dependency are also strongly associated with abuse and neglect. In 22 states, 90% of caregivers reported for child abuse are active substance abusers. Certain physical handicaps such as blindness, para- or quadriplegia, or physical anomalies restrict/limit the caregiver's ability to prepare and offer a variety of foods. Education, referrals and service coordination with WIC will aid the mother/caregiver in developing skills, knowledge and/or assistance to properly care for a total dependent.

Continued on next page

902 Woman or Infant/Child of Primary Caregiver with Limited Ability to Make Feeding Decisions, Continued

Justification for high risk

Not applicable

References

1. Accardo and Whitman B.: Children of Mentally Retarded Parents; American Journal of Diseases of Children; 1990; 144:69-70.

2. Pollitt, Ernest and Wirth: Mother-Infant Feeding Interaction and Weight Gain in the First Month of Life; J. Am. Diet Assoc.; 1981; 78:596-601.

3. Grand, Stephen, Dietz: Pediatric Nutrition: Theory and Practice; 1987; pp. 627-644.

4. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment; 1996; pp. 321-323.

5. WIC Program Regulations: Section 246.7(e)(2).

903 Foster Care

Definition/ cut-off value

Entering the foster care system during the previous six months or moving from one foster care home to another foster care home during the previous six months.

Participant category and priority level

Category	Priority	High Risk
Pregnant	IV	N
Breastfeeding	IV	N
Postpartum	VI	N
Infants	IV	N
Children	V	N

Documentation

Enter NRF #903 in screen 106.
Document referrals in screen 106.
- coordinate services with Human Services

Schedule appropriate nutrition education at next visit.

Note: The adult accompanying a foster child to WIC for a first time certification may have no knowledge of the child's eating patterns, special dietary needs, chronic illnesses or other factors which would qualify the child for WIC.

Parameters for auto assign

Not auto assigned.
Must be manually selected.

Continued on next page

903 Foster Care, Continued

Counseling guidelines

Refer to health care provider, if needed.
Review basic infant and/or child nutrition.
Review nutrition risks that many foster care children have:

- anemia
- diabetes
- seizure disorders
- inadequate nutrition
- growth retardation including short stature
- failure to grow

Suggested handouts

Infant Feeding Guide
The First 12 Months
How Much Is Enough for My Child?
Daily Food Guide - Children/Pregnant/Breastfeeding/Postpartum

Follow up and assessment guidelines

If pregnant, weight gain plotted and assessed at each clinic visit.
Appropriate nutrition education at each visit.

Justification

"Foster children are among the most vulnerable individuals in the welfare system. As a group, they are sicker than homeless children and children living in the poorest sections of inner cities." This statement from a 1995 Government Accounting Office report on the health status of foster children confirms research findings that foster children have a high frequency of mental and physical problems, often the result of abuse and neglect suffered prior to entry into the foster care system. When compared to other Medicaid-eligible children, foster care children have higher rates of chronic conditions such as asthma, diabetes and seizure disorders. They are also more likely than children in the general population to have birth defects, inadequate nutrition and growth retardation including short stature.

Continued on next page

903 Foster Care, Continued

Justification (continued)

Studies focusing on the health of foster children often point out the inadequacy of the foster care system in evaluating the health status and providing follow-up care for the children for whom the system is responsible. Because foster care children are wards of a system which lacks a comprehensive health component, the social and medical histories of foster children in transition, either entering the system or moving from one foster care home to another, are frequently unknown to the adults applying for WIC benefits for the children. For example, the adult accompanying a foster child to a WIC clinic for a first-time certification may have no knowledge of the child's eating patterns, special dietary needs, chronic illnesses or other factors which would qualify the child for WIC. Without any anthropometric history, failure to grow, often a problem for foster children, may not be diagnosed even by a single low cutoff percentile.

Since a high proportion of foster care children have suffered from neglect, abuse or abandonment and the health problems associated with these, entry into foster care or moving from one foster care home to another during the previous six months is a nutritional risk for certification in the WIC Program. CPAs using this risk should be diligent in evaluating and documenting the health and nutritional status of the foster child to identify other risks as well as problems that may require follow-up or referral to other health care programs. This nutritional risk cannot be used for consecutive certifications while the child remains in the same foster home. It should be used as the sole risk criterion only if careful assessment of the applicant's nutritional status indicates that no other risks based on anthropometric, medical or nutritional risk criteria can be identified.

The nutrition education, referrals and service coordination provided by WIC will support the foster parent in developing the skills and knowledge to ensure that the foster child receives appropriate nutrition and health care. Since a foster parent frequently has inadequate information about a new foster child's health needs, the WIC nutritionist can alert the foster parent to the nutritional risks that many foster care children have and suggest ways to improve the child's nutritional status.

Continued on next page

903 Foster Care, Continued

Justification for high risk

Not applicable

References

1. American Medical News: America's Sickest Children; January 10, 1994; 15-19.
2. Chernoff, Robin, et al: Assessing the Health Status of Children Entering Foster Care; Pediatrics Vol. 93., No. 4; April 1994; 594-600.
3. DuRouseau, Pamela C., et al: Children in Foster Care: Are they at nutritional risk?; Research and Professional Briefs Vol. 91, No. 1; January 1991; 83-85.
4. Government Accounting Office: Foster Care - Health Needs of Many Young Children Are Unknown and Unmet; GAO/HEHS; 95-114; May 1995.
5. Halfon, Neal, et al: Health Status of Children in Foster Care; Archives of Pediatric and Adolescent Medicine; Vol. 149; April 1995; 386-392.
6. Schor, Edward: The Foster Care System and Health Status of Foster Children; Pediatrics Vol. 69, No. 5; May 1982; 521-527.

Nutrition Risk Criteria Not Allowed

Nutrition risk criteria not allowed

USDA does not currently allow the following nutrition risk factors.

- Maternal Short Stature
- Abnormal Postpartum Weight Changes
- Pregnancy at Age Older than 35
- History of Post-term Delivery
- Preeclampsia/Eclampsia
- Placental Abnormalities
- Hemorrhage associated with Pregnancy
- Low Level of Maternal Education/Literacy
- Prepregnancy Underweight for Postpartum Women
- Nulliparity
- Maternal Smoking (for postpartum women only)
- Passive Smoking
- Smokeless Tobacco
- Urinary Tract Infections
- Weight for Age
- Risk of Anemia: History of Anemia Requiring Treatment
- Rapid Growth (not related to catch-up growth)
- Chronic or Recurrent Respiratory Infections (as an independent risk criterion)
- Bronchitis
- Otitis Media
- Food Intolerances other than those specifically allowed (Celiac Disease, Lactose Intolerance, etc.)
- Vegetarian Diets other than Vegan
- Excessive Caffeine (all categories except for Breastfeeding Women)
- Food Insecurity
- Transfer from Infant to Child Diet
- Infant Taking More than 1 quart of formula per day
- Consumption of Fish from Water Contaminated with Toxic Substances
- Accidental Poisoning
- Consumption of Drinking Water Contaminated with Nitrate
- Infant or Child of Woman with Diabetes during Pregnancy
- Attention Deficit Hyperactive Disorder/Attention Deficit Disorder